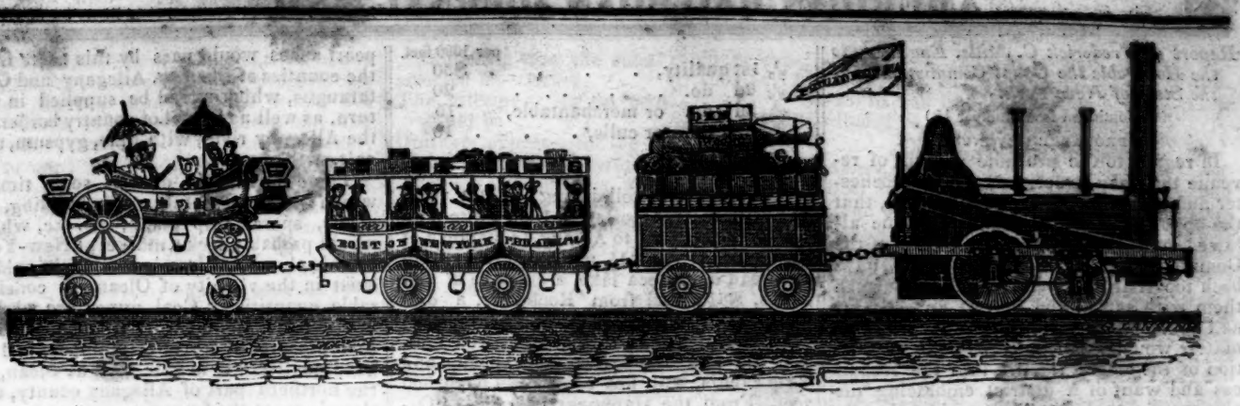

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, APRIL 25, 1835. [VOLUME IV.—No. 16.

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AMERICAN RAILROAD JOURNAL.

NEW-YORK, APRIL 25, 1835.

Canal Navigation.—As *speed* in travelling has become, to business men, at least, a matter of much importance,—and as an increased rate of travelling is so desirable on our canals, and may so easily, as we are satisfied, be attained,—we shall give at length in the Journal, a work on "Canal Navigation—the resistance of water to boats upon canals, and other bodies of water; being the results of experiments made by John MacNeil, Esq. M. R. J. A., Member of the Institution of Civil Engineers, London."

This work gives plans and descriptions of the iron boats which have been, and are now, in use on canals in Great Britain—especially on the Androsian, or Paisley Canal, on which the ordinary speed has been, for nearly two years, from *nine to ten miles an hour, without injury to the canal banks*, although 12 to 14 passages were made per day.

The wonderful performances on this canal, and the contradiction of previous received theories, as regards the resistance of fluids at high velocities, will be productive of immense benefits to this country, where canals are so much in use.

Baron Thiery of Panama has addressed a memoir to the President of the republic of New Grenada on the subject of connecting the Atlantic and the Pacific. The Baron prefers a canal to the contemplated railroad, and pledges himself to complete one within two years.

Railroad Locks.

To the Editor of the Am. Railroad Journal:

Sir,—The frequent impracticability of excavating mountainous tracts, and the danger, expense, and inconvenience of inclined planes and stationary steam engines, have compelled engineers to pursue the valleys of streams in locating routes for railroads. That method, while it greatly extends the distance, cannot in all cases obviate the necessity for planes; and though it may diminish their number, is objectionable on principles of expedience and economy. It is questionable, whether the public would not rather encounter some hazard from an elevating power, than be subject to the expense and delay incident to travelling and transportation over the increased distance of a meandering course, however willing they might be to sacrifice *either* time or expense, to secure safety and the abolition of inclined planes and stationary steam power. One, and the principal object, of inclined planes on railroads intended for passengers and forwarding articles of commerce, is diminution of distance, and if that can be accomplished by locks, with more security and less expense, the loss of time in *ascending elevations* will be of little consequence.

It is not contended that locks equal the speed of inclined planes and stationary steam power in ascending, but it will be shown that long routes can be performed in less time, with locks to overcome heights, than by winding round their base and pursuing the valleys, and at much less expense. The importance of this view, in the economy of locks, depends on the formation of the country through which a railroad is laid, as the difference in the distance of a route *over* the acclivities and one shunning them will be governed by the number and magnitude of the elevations.

In case the increased distance of a "serpentine course is very considerable" compared with the extent of the whole line, and the excess of time to perform the route by locks inconsiderable, the benefit community would derive from constructing the New-York and Erie Railroad with locks, is too obvious to require much comment. By referring to the survey of that road some idea may be formed of the economy of locks. Allowing only 40 miles increased distance for the "serpentine course, to obtain easy grades of acclivity," and that a very expensive plane must be constructed, the diminution of that distance (*equal to one ninth of the length of the Erie Canal*) in *travelling* from New-York to Lake Erie, would be an immense saving to the public, without reference to transportation.

The advantages of locks on railroads are not confined to the public; the stockholders, as individuals, derive two important benefits from their use. *Stationary steam engines* are dispensed with, and the locomotive *ascends* with the train. It is the heavy annual expense of stationary steam power and appendages on inclined planes, and the great inconvenience of detaching the locomotive from the waggons in ascending, that renders distance so preferable to railroad companies, when distance will obviate the necessity of planes. W. G.

Black river Canal.—The committee of the Senate have made a long report upon the subject of this Canal.

"The report acknowledges the importance of the project, but, owing to the exhausted state of the Treasury, and the various improvements already authorized, the committee express the opinion that the bill authorizing the construction of this Canal, *ought not to pass.*"

Mad River and Lake Erie Railroad.—The Urbana Record, of the 4th inst., says that the directors of this work met at that place, on the 1st inst., for the purpose of devising means for its commencement.

They resolved to commence the work at its northern extremity, on or about the 1st of June, and to prosecute it vigorously until completed.

The northern termination is at Portland, or Sandusky city, on Sandusky bay.

The Indianapolis Journal, of the 3d inst. states that the Canal Commissioners have determined (no unforeseen providence preventing) to complete thirty-two miles of the Wabash and Erie Canal, from Fort Wayne to Huntington, by the 1st of June.

These improvements all tend to increase the amount of commerce which will shortly pass over Lake Erie, and to enhance the importance of a connection with that inland sea.—[Pittsburgh Gazette.]

Canals in Illinois.—A bill has passed both branches of the Legislature of this State, for the construction of a canal from the Illinois river to Lake Michigan. The improvements, when completed, will be 115 miles in length, and will open a direct communication between the Lake and New Orleans, and the river St. Lawrence and Gulf of Mexico. The estimated cost of this work is $3,000,000.—[National Intelligencer.]

Report of Frederick C. Mills, Engineer, to the Honorable the Canal Commissioners of the State of New-York.

(Continued from number 15.)

PROBABLE REVENUE.

In regard to the probable amount of revenue that may be derived from the Rochester and Olean canal, I would remark, that the opportunity afforded and the time allowed me since I learned the wishes of the Commissioners upon that subject, have been too limited to enable me to furnish them with as full and perfect an estimate as I could wish. The importance of this matter would seem to demand the institution of the closest inquiry into the resources and want of a district embracing the amount of population that would naturally be dependent upon the canal, with a detail of facts relating to the imports and exports, and the capacity of the country for tending her improvements in agriculture, and in all the various branches of art and manufacture, and also the probable amount of freight which would make use of this channel in passing to and from the Ohio river. To perform all this in a satisfactory manner, would require more time and attention than I have been able to devote to it; but that you may be aided in forming an approximate estimate, I will briefly present for your consideration the following facts collected from personal observation, and from residents on different parts of the route, as the most correct view I am able to give of the subject.

An account was taken of the quantity of timber rafted down the Allegany river during one year, inoluding the towns bordering on the Ischua, Oil, and Olean creeks, and that portion of country lying upon the head waters of the Allegany river, both in this State and in the State of Pennsylvania. The amount was found to be 100,000,000 of feet. The towns upon the Genesee river, above the confluence of Black creek, are generally well timbered, and but a very small portion has found its way to market, for want of a channel thereto. This whole district abounds with sites for saw-mills, which it is supposed would be occupied so soon as an avenue to market for their products should be opened. Besides the above, it is supposed by some gentlemen residing in that section, that one hundred million feet of lumber would be manufactured annually on the completion of the canal. Others consider this amount much too large, and upon comparing the opinions of different persons consulted on the subject, I am led to believe that 22 millions of feet will, in all probability, be manufactured in the region, embracing the district of country from the head waters of the Genesee river to Mount Morris. Within a short distance of Dansville are now 55 saw mills, from which, and from the different towns between Dansville and Scottsville, 8 millions more may be calculated upon. For safety, let us assume that the total amount of lumber annually manufactured would be 117½ millions of feet. The average cost of rafting lumber down the Allegany river to market is $3½ per 1,000 feet, and it brings when in market, from $5½ to $14 per 1,000 feet, which, if we allow $9½ to be the average, would leave, (after deducting the expense of rafting,) $6 per 1,000 feet for the manufacturer. The retail price at the mills is about $5½.

Of the lumber cut in Oswego county, which lies 195 miles from Albany, by the Erie and Oswego canals, more than three fourths is sent to market, and is rated as follows, viz:

		per 1000 feet.
1/10	1st quality,	$30
3/10	2d do.	20
3/10	3d do. or merchantable,	15
2/10	4th do. or culls,	10
10/10		

At the rate of toll during the last year, the price of transportation from Fulton, on the Oswego canal, to Albany, (a distance of 195 miles,) was $4½ per 1,000 feet; from the head of Seneca lake, a distance of 265 miles, $6½; and from Rochester, a distance of 270 miles, $6¾. Hence the average cost of transportation of sawed lumber, by the Rochester and Olean, and Erie canals, will not exceed $9 per 1,000 feet. From the statement of rates in Oswego county, it is apparent that one third of the lumber cut on and in the vicinity of the Rochester and Oleau canal, might be advantageously transported thereon to the Erie canal, and thence to Albany; but as a portion of the lumber estimated must come from Pennsylvania, and from the borders of the Allegany river for some distance below Olean, and as the opening of this channel will, in all probability, create a competition between the eastern market and that upon the Allegany river, and the Ohio, it is reasonable to conclude, that not more than one fifth of the whole amount will pass by this channel to the Erie canal, equal to 19,500,000 feet b. m., which, averaging a distance of 70 miles through the R. and O. canal, will amount, at 8 mills per 1,000 feet per mile, to $10,920.

Although the counties of Cattaraugus and Allegany possess a considerable share of arable and and fertile land, yet but little exertion has been made to raise greater crops of grain than are sufficient for home consumption; but little revenue could therefore be expected from this branch of trade, under present circumstances; but the inhabitants of these counties are generally of opinion that the opening of the canal would give a great impetus to this branch of agriculture, and that it would form a sure and gradually increasing source of trade, which would probably make up the deficiency in the revenue, which would take place when the timber becomes more scarce. Some pains have been taken to ascertain the precise amount of wheat raised in Livingston county by residents there, who have furnished me with the information which they have collected. They state that one million of bushels are annually raised there, of which it may be presumed a large proportion would pass through the canal. Two or three of the extreme eastern towns of Livingston county send their produce directly to the Erie canal; but the deficiency, will be supplied by the towns of Perry, Covington, and others in Genesee county; and it is believed the annual amount may be safely estimated at 650,000* bushels, averaging 35 miles of distance, upon the canal, which at the present rate of toll, would amount to $6,142.50. Of the probable amount of other agricultural produce which would find a vent through this channel, no data could be obtained from which any certain inferences might be drawn. I am, however, assured that much larger quantities of produce than sufficient for home consumption, such as butter, cheese, lard, pork, tallow, &c. &c. can and would be produced so soon as a communication is opened to a market for its disposal. In addition to these, pot and pearl ashes would pass by this route from the counties of Steuben, Allegany, and Cattaraugus, which would be supplied in return, as well as a tract of country bordering the Allegany river, with lime, gypsum, and salt.

* A portion of this is estimated as flour.

There is in this district some timber which would be useful in ship building, for masts, spars, ship plank, &c. &c. which would probably seek a market at New-York by this channel. Iron oar also is said to exist in the vicinity of Olean, in considerable quantities. Coal mines are worked in Pennsylvania, 40 miles from Olean. The coal procured there is bituminous, and of good quality. It is now used at Olean, in the northern part of Allegany county, and elsewhere, at the furnaces.

The revenue, therefore, which may be derived from the canal, would be as follows:

19,500,000 feet of sawed lumber,		10920 00
159,000 feet sq. timber, masts, &c.		1575 00
3,800 M. shingles,		532 00
750 tons hoop-poles, laths, staves, heading, &c.		180 00
15,000 tons wheat, (500,000 bushels,)		4725 00
8,800 tons ashes, beef, pork, glass, beer, domestic spirits, butter, cheese, flour, wool, and other agricultural productions,		4752 00
6,000 tons merchandize,		5400 00
4,600 tons salt,		1269 60
4,120 tons gypsum,		1030 00
900 tons brick, clay, lime, sand, iron ore, &c.		225 00
On boats, passengers, coal, and miscellaneous articles,		6000 00
2,000 tons additional salt, in consequence of the facilities afforded by the canal and for the Allegany valley,		1610 00
1,500 tons additio'l gypsum, as above,		675 00
1,200 tons additional hoop-poles, staves, heading, lath, &c. as above,		1584 00
800 tons additional merchandize, as above,		4752 00
12,000,000 feet sawed lumber, (on Erie canal,)		25920 00
150,000 feet square timber, masts, &c. (on Erie canal,)		6075 00
2,000 M. shingles,		1080 00
Total,		$78304 60

(Of this amount would be collected on the Rochester and Olean canal, $39125 60.)

The Cayuga and Seneca canal is 22 miles long, and for the past six years the tolls averaged $13,791.64 per annum, equal to $626.89 per mile. The Chemung canal is 40 miles long, and produced last year, (1834,) $8,378.05, equal to $84.45 per mile. The Seneca lake is 40 miles in length, separates these two canals, and taking them and the lake in connection, and supposing them to form one continuous line of canal, (102 miles,) upon which toll is charged, it would bear some comparison to the contemplated Rochester and Olean canal, and by averaging the above amounts, we have $355.67 toll per mile, for the whole distance, including the lake, equal for 102 miles to $36,278.34. Allowing the same rate of toll per mile to the Rochester and Olean canal, the amount would be $43,391 74.

For the fall of 1833 and the year 1834,

the tolls of the Crooked lake canal amount to $1,674.24. Some of the property on which this toll was collected would not have found its way to the Seneca lake had not this canal been constructed. Hence, the amount thus added, should be deducted from the tolls allowed to the Cayuga and Seneca canal, which would approximate more nearly to the estimated revenue for the Rochester and Olean canal.

From a statement furnished by the collector at Geneva, it appears that in 1834 7,573,566 feet of sawed lumber cleared from his office, and from a statement furnished by Mr. Newell, that 9,374,564 feet cleared from the Chemung canal during the same season; the collector at Geneva states that about one third of this latter was included in his account; consequently, by deducting that amount, and supposing that the remainder passed through the Cayuga and Seneca and Erie canals, we should have a total amount of 13,823,275 feet.

The number of cubic feet of timber passing the same office, upon the same supposition would be 427,492 feet.

From the above statement it may be seen that the cubic feet of timber obtained from this district, bears a much greater proportion to the sawed lumber than that estimated for the Rochester and Olean Canal; which difference was made under the belief that their superior hydraulic privileges, and their distance from market, will induce them to send a greater proportion of sawed stuff.

Supposing that the canal could be constructed for . . .	$1,890,614.12
The interest at 4½ per cent. per annum, would be . . .	85,077 53
Ordinary expenses for repairs of the whole distance, 122¼ miles, estimated at $220 per mile, including lock-tenders,	26,895 00
Renewal in course of 10 years: Wood work, &c. of 42 road bridges, at $229, $9,618.00; do. of 211 road and farm bridges, at $139, $29,329; do. of 4 aqueducts, $8,164.-44; do. of 44 waste-weirs, at $105, $4,620; total, $51,-731 44—equal per annum to	5,173 14
Superintendents and collectors of tolls, and 5 tenders of reservoirs, . . .	6,800 00
	$135,305 77
Exceeding the estimated am't of tolls, exclusive of the products from, and the merchandise to the Ohio valley, by	$57,001 17

Statement of the Cost of Repairs on the following State Canals, together with Superintendence and Lock Tending.

Erie and Champlain canals, from January 1st, 1826, to September 30, 1834, 9 years, per annum per mile, ...	$608 28
Oswego canal, from 1828 to 1834, 7 years, per annum per mile,	297 51
Cayuga and Seneca canal, from 1829 to 1834, 6 years, per annum per mile, ...	301 08

If we take the Cayuga and Seneca canal for the purpose of comparison, it will be necessary to add thereto the extra number of lock tenders consequent on the greater amount of lockage on the Rochester and Olean canal in proportion to the distance, equal to $35.41 per annum per mile, which added to the above annual cost of the Cayuga and Seneca canal, is equal to $336.49.

Supposing that the canal could be constructed for . . .	$1,890,614 12
The interest at 4½ pet cent. would be	85,077 63
Ordinary expenses for the repair of the work, including extra lock tenders, at $336.49, ...	41,135 90
Collectors, including office expenses, salaries, clerk hire, &c. and 5 reservoir tenders, at $160 each, ...	4,800 00
	$131,013 53

The average cost of repairs on the canals above mentioned, is $402.29, and adopting this as the cost upon the Rochester and Olean canal + the extra lock tenders, as before stated, equal in all to $437.70 per annum per mile, we have—

Interest on cost as above,	$85,077 63
Ordinary expenses at $437.70 per mile, ...	53,508 82
Collectors, as above . .	4,900 00
	$143,386 45

Estimating the repairs on the Rochester and Olean canal to be the same as the average upon the Erie and Champlain canal, (equal per annum per mile to $608.28,) in proportion to the cost, they would amount to $395, including lock tenders and superintendents, which, for 122¼ miles, would amount to $48,288 75

Add to this collectors' fees, including office expenses, clerk hire, &c.	4,000 00
Interest on cost . . .	$85,077 63
Total cost per annum, .	$137,366 38

Should the merchandize from the city of New-York to the valley of the Ohio river take this route, we may estimate the amount at not less than 25 millions of pounds, the tolls on which would amount to $24,400, making the annual revenue of the canal for the first six years after its construction, amount to $102,704.60. On account of the imperfect nature of the data from which this conclusion is drawn, this can only be said to be an approximate estimate, though I am inclined to the opinion that it would not be found to exceed the true amount which the canal would yield.

The receipts upon the Erie canal during the last year amounted to $1,179,745, and 94 lockages per day were made during the season of navigation.

Assuming the number of boats which may pass upon the Rochester and Olean canal to be one-eighth of the number upon the Erie canal, that is, about six boats daily each way, at the same ratio, the amount of tolls will be $42,250, which approximates very nearly to the first estimate of the amount that would be collected on said canal.

A comparison may be drawn between the section of country which would probably be affected by the Rochester and Olean canal, and other sections where the amount actually furnished by and supplied to a certain number of inhabitants, may be ascertained with some degree of accuracy. This is the case with the district of country within the State of New-York bordering upon Lake Champlain; it is also well timbered, and, though the soil is inferior, in some respects resembles the southern part of the country through which the Rochester and Olean canal passes, which circumstances have led to its selection for the purpose of comparison.

From the statement marked G, appended to the report of the Commissioners, dated January 23, 1832, it appears that the following amount of property passed Whitehall to and from the portion of New-York alluded to, during the year 1831.

Cleared south at Whitehall.

Ashes, barrels, . . .	406
Beef and pork, barrels, . .	388
Coal, bushels, ...	3,096
Grain, "	3,233
Domestic spirits, gallons, . .	33,130
Glass, boxes, . . .	2,818
Butter and cheese, lbs. . .	135,551
Copperas, ...	0
Furs and peltry, lbs. . .	5,522
Furniture, lbs. . .	196,722
Hoop-poles, " . .	1,242,640
Iron and nails, " . .	3,312,291
Iron ore, " . .	583,452
Iron castings, " . .	14,928
Leached ashes, " . .	340,260
Merchandize, " . .	428,600
Pig iron, " . .	82,548
Rags, " . .	24,298
Stone, " . .	341,137
Sand, " . .	152,160
Staves and heading, " . .	248,400
Sundries, " . .	57,726
Wool, " . .	86,522

Cleared north from Whitehall.

Ashes, barrels, . .	0
Beer, " . . .	93
Beef and pork, " . . .	1,175
Flour, " . . .	6,158
Western salt, bushels, . .	47,094
Foreign salt, " . . .	1,542
Agriculture, &c. " . . .	250,065
Brick, clay, lime and sand, .	194,245
Buffalo robes and deer skins, .	1,928
Coal, pounds, . .	262,888
Cotton, " . . .	46,417
Furniture, " . . .	92,497
Horses, " . . .	6,600
Hides, " . . .	303,957
Iron ore, " . . .	0
Merchandize, " . . .	7,401,737
Plaster, N. S. " . . .	67,050
" western, " . . .	203,803
Pig iron, " . . .	45,920
Stone, " . . .	186,536
Scrap iron & broken castings, lbs.	1,960
Tallow, lbs.	5,174
Lumber, sawed feet, . .	49,008,450
Timber, cubic feet, . . .	310,589
Shingles, M., ...	3,228
Wood, cords, ...	2,377

The above articles were forwarded to and by the inhabitants of Whitehall, Hampton, half of Fort Ann, half of Granville, Dresden, and Putnam, in Washington county, ... 8,820

Bolton, Hague, Warrensburgh, Chester, and Johnsburg, in Warren county, . . .	5,747
Essex county, ...	19,287
Clinton county, ...	19,344
Franklin county, ...	11,322
Total, . .	64,510

From the towns of Caledonia, Avon, York, Geneseo, Leicester, Mount Morris, Groveland, Conesus, Sparta, Springwater, and a portion of Livonia, in Livingston county, ...	24,790
From China, Weathersfield, Gainsville, Castile, Perry, Warsaw, Orangeville, Middleburgh, Covington, and Leroy, in Genesee county, by	23,594
From the county of Allegany, by	26,276
From Dansville, three-fourths of Howard, three-fourths of Conhocton and Hornellsville, in Steuben county, by . . .	6,847

From Freedom, Yorkshire, Ashford, Farmersville, Machias, Ellicotville, Little Valley, Randolph, Napoli, Great Valley, Franklinville, Lyndon, Hinsdale and Olean, in Cattaraugus county, by	12,302
From Carroll, Ellington, Gerry, and Busti, in Chautauque county, by	5,084
	98,893
Pro-rata increase since last census, deduced from the increase of the five preceding years, . . .	30,478
Total, . .	129,371

Being a fraction more than double the number supplied by means of the Champlain canal.

The whole length of the main canal, Dansville side cut and navigable feeders is 122¼ miles, and in the following statement it is assumed that each article passes an average distance of 60 miles upon the canal, the number of inhabitants supplied, and the quantity furnished by and to them being deduced from the foregoing statements:

Property going north,			
Ashes,	barrels,	812	$87 69
Beef and pork,	"	776	59 86
Charcoal,	bushels.	6,192	33 44
Grain,	"	6,466	87 29
Domestic spirits,	gallons,	66,260	161 01
Glass,	boxes,	5,636	42 60
Butter & cheese,	pounds,	271,102	73 19
Furs and peltry,	"	11,044	9 27
Furniture,	"	393,444	106 22
Hoop poles & laths,	"	2,485,280	372 79
Iron and nails,	"	6,624,582	1,788 64
Iron ore,	"	1,166,904	175 03
Iron castings,	"	29,856	8 95
Leached ashes,	"	608,520	102 07
Merchandize,	"	857,200	462 88
Pig iron,	"	165,096	44 57
Rags,	"	48,596	13 12
Stone,	"	682,274	102 34
Sand,	"	304,320	45 64
Staves & heading,	"	496,800	208 65
Sundries,	"	115,452	31 67
Wool,	"	173,044	46 72
Coal,	"	525,776	141 96
			$4,205 60

Property going south.			
Beer,	barrels,	186	$12 55
Beef and pork,	"	2,355	181 67
Flour,	"	12,316	718 26
Western salt,	bushels,	94,188	727 88
Foreign do	"	3,084	310 86
Agriculture, &c.,	pounds,	500,130	270 07
Brick, clay, lime & sand,	"	388,490	58 27
Buffalo robes & deer skins,	"	3,856	1 61
Cotton,	"	92,834	25 06
Furniture,	"	184,994	55 49
Horses,	"	13,200	6 54
Hides,	"	407,914	110 13
Iron ore,	"	292,000	43 80
Merchandize,	"	14,803,474	7,993 87
Plaster, N. S.,	"	134,100	72 41
do western,	"	407,606	61 14
Pig iron,	"	91,840	24 79
Stone,	"	373,072	55 96
Iron scraps and br'kn castings,	"	3,920	1 05
Tallow,	"	10,346	5 59
			$10,736 99
			4,205 60
Total, . . .			$14,942 59

The district of country included in this comparison, does not comprise any part of Pennsylvania; but it is highly probable that the inhabitants of that section of the State in the vicinity of the work, will draw their supplies from it; and as the whole of this region is far superior in the quality of the soil to that upon Lake Champlain, it affords a fair presumption that the estimate for agricultural products and supplies to the inhabitants near the Rochester and Olean canal is not overrated. As the quantity of lumber which might be expected to pass through the canal would not be dependent upon the number of inhabitants in the district, I have not included that article in the foregoing table. Indeed, it is difficult to ascertain with any degree of accuracy, when so many circumstances are to be taken into account, to what extent this branch of trade may be carried. Although the timber is equal in quality and more abundant than in the neighborhood of the Champlain canal, yet the increased distance from market, and the consequent expense of transportation, together with the competition created by a rival market upon the Allegany river, will probably reduce the amount below that which passed through the Champlain canal in 1831.

As before mentioned, lumber is transported on the Oswego and Erie canals from Fulton, to market at Albany, 195 miles, for $4 50 per M. As the probable distance which the lumber of this district must traverse, is about double that of the former, the price of transportation may be set down at $9.

The timber upon Lake Champlain, which averages a distance of 129 miles from market, at the same rate, costs $2 97½; but the expense of a trans-shipment at Whitehall, together with the delays and dangers of lake navigation, place the advantages of this region more nearly upon a par with those of the Oswego district.

Upon a comparison of the expense of transportation from all these different points, it is evident, that should an avenue to market for the timber upon the Allegany river and around the southern extremity of the Rochester and Olean canal be opened, only that portion of the timber rated as 1st and 2d, about one-fifth of the whole quantity annually manufactured, (19,500,000 feet,) would be able to withstand the powerful competition of other districts more advantageously located. Assuming one-half the amount which passed upon the Champlain canal as the quantity which would pass the Rochester and Oldan canal, and supposing it to average 75 miles in distance thereon, we should have the following results, viz:

24,504,225 ft. b. m. sa'd lumber,	$14,702 53
155,294 cubic ft. timber,	1,747 05
1,614 M. shingles,	242.10
1,488 cords wood,	1,782 00
	$18,473 68

There passed Utica, from all the lumber region west of that place, the following amount of square timber, masts, spars, &c., during the years 1830-31-32 and 33, viz:

In 1830,	262,453	cubic feet.
1831,	691,225	"
1832,	851,022	"
1833,	1,783,255	"

Averaging per year, 896,989 cubic feet.

This timber was principally brought from the vicinity of the Oswego canal, the Cayuga and Seneca lakes, and the Erie canal between Utica and Buffalo; and during the last two years, a portion was brought through the Chemung and Crooked lake canals, making a total distance by lakes and canals, of 457 miles, averaging about 227 miles from market. The timber upon the Rochester and Olean canal will average about 345 miles from the same market. The quantity forwarded must depend upon the expense of transportation and the quality, which latter circumstance is much in its favor. If the distance from market were equal in both cases, the lumber proportionate to the length of this canal would be 351,621 cubic feet.

I find from a statement furnished by the collector at Geneva, that the property sent from that place through the Cayuga and Seneca canal, and supposed by the Commissioners to be furnished by 47,510 persons inhabiting the district adjacent to the Seneca lake, "comprising part of Ontario, Seneca, Tompkins, Tioga, Steuben, and the entire county of Yates," in the year 1829, is as follows, viz:

Of wheat, coarse grain, flour, pork, whiskey, ashes, butter, lard, peaches, apples, wool, beans, glass, furniture, sundries, hoop-poles, &c. &c., tons,	9,164
Lumber, feet, ...	1,222,536
Shingles, M., ...	6,881

There was received during the same year, and for the same and some additional territory,

Of merchandize, tons, . .	2,490½
Furniture, " . .	104
Non-enumerated articles, tons, .	205
Salt, tons, ...	1,203
Gypsum, tons, ...	1,097½
Total, . .	5,100

Allowing the population which will be accommodated by the construction of the Rochester and Olean canal, and the Dansville side cut, to furnish to those canals as much business according to their numbers, as those included in the preceding statements, we have the following, viz:

	tons.	tolls.
Of wheat, grain, &c.	24,900	$13,445
For the supply of the same—		
Merchandise, . .	7,300	7,884
Furniture, . . .	300	180
Non-enumerated, . .	600	648
Salt, ...	3,500	966
Gypsum, ...	3,100	930
		$24,054

The route of the Rochester and Olean canal is about equally divided into two sections, the one resembling the country bordering the Cayuga and Seneca lakes, in the richness and fertility of its soil, the other being more nearly allied to the district bordering Lake Champlain in the quantity and quality of its timber; and in making comparisons between these different sections, it will be seen that the amount of agricultural productions estimated to pass through the canal, falls short of the proportionate amount shown to have passed upon the Cayuga and Seneca canals, and that the amount of lumber calculated upon is much less than that furnished through the Champlain canal, in proportion to the number of inhabitants and the extent of timber region.

In addition it may be well to state, that in 1825, of the 3,492,000 acres lying in Cattaraugus, Allegany, Genesee, Livingston, and Steuben counties, only 476,324 were under cultivation. Although the improvements in the counties of Allegany and Cattaraugus since that period have undoubtedly been great, yet they cannot be compared in extent with those of the more northern counties, where the facilities afforded by

their proximity to the Erie canal, and also by their being able to make use of the Genesee river as a highway, have caused improvements to proceed with great rapidity, and it is beyond doubt, that should similar facilities be extended to the more southern counties for the transportation of the products of their industry, improvements would advance in that section with a pace proportioned to the fertility of the soil, and its adaptation to agricultural purposes. The benefit of these improvements will in part be reaped by the State, in the increased amount of taxable property.

Respectfully submitted.

FRED'K C. MILLS,
Civil Engineer.

Utica, Feb. 17, 1835.

[From the Journal of the Franklin Institute.]

Report on Mr. M. W. Baldwin's Locomotive Engines.

The Committee on Science and the Arts, constituted by the Franklin Institute of the State of Pennsylvania for the promotion of the Mechanic Arts, to whom was referred for examination certain improvements in Locomotive Engines, made by Mr. Matthias W. Baldwin, of the City of Philadelphia, REPORT:

That they have examined several of these engines, which are now being built in Mr. Baldwin's workshop, and find in them numerous improvements, affecting nearly every part of the machine. The first they will notice are in the position and construction of the force pumps, which supply water to the boiler; the guides of the piston rods are made hollow, and the cavities are used for the chambers of the force pumps, thus giving additional strength to the guides, without much increasing their weight, and dispensing entirely with the frame and fixtures of the ordinary force pumps. Each of these pumps is furnished with five valves, three of which are situated between the boiler and the piston, and two between the piston and water tank. The valve nearest the boiler is loosely swivelled to a stem, passing through a steam-tight collar in the top of the valve box, by means of which the valve can be sounded, and, in most cases, freed from obstructions.

The other four valves are contained in one box; this box is secured to the pump by a stirrup, which can be removed by loosening a single screw, so that the valves can be taken out, cleansed, and replaced, in a few minutes. By thus increasing the facility of examining and cleansing the valves, and thereby diminishing the liability of the force pumps to obstruction, the supply of water to the boiler will be rendered much more regular and certain; and the chief causes of those fearful explosions incident to steam engine boilers will be in a great measure removed, as it is confidently believed that these accidents are generally the result of a deficiency in the supply of water.

Another improvement consists in the manner of reversing the motion of the steam valves. This is done in the English engines by means of a treadle, and a series of levers, which move the eccentrics laterally on the propelling axle, after the hooks of the eccentric rods are thrown out of gear with the rock-shafts. In Mr. Baldwin's engines, the arms of the rock-shafts extend on opposite sides of the fulcrum, and each eccentric rod is furnished with two hooks, turned in opposite directions, so that it may be geared to either arm of its rock-shaft; the eccentrics are fixed immovable upon the axle, and the eccentric rods, instead of being carried (as they usually are) to the front of the engine, are brought to the stage at the hinder part, and there geared to either arm of the rock-shafts, at the option of the engineer. When the hooks of the eccentric rods are geared to the same arms of the rock-shafts as the valve rods are, the motion of the valves corresponds to that of the eccentrics; if they be geared to the opposite arms, the motion of the valves will be reversed; and if they be not geared to either arm, the rock-shafts and steam valves can be worked by the hand levers. The advantages of this arrangement are several; the eccentrics being firmly secured to the axle, are less liable to get loose, and out of repair; it dispenses entirely with the treadle, and its appendages, and also with four rock-shafts, and the complicated hand-gear of the English method.

But the most important benefit is, that the rock-shafts and eccentric hooks are placed immediately under the eye, and within the reach, of the engineer, which is not the case in the ordinary arrangement.

The axle of the driving wheels has also been made the subject of improvement by Mr. Baldwin. Instead of fixing the ends of the axle into the centres of the wheels, as is usually done, he dispenses with one of the arms in each crank, and fixes the wheel upon the wrist of the crank, with its centre adjusted to the centre of the axle. By this change in the form of the axle, the power of the engine is applied directly to the wheel, without the intervention of an arm of the crank, thus diminishing the strain upon the axle, and, consequently, lessening its liability to be broken. By this means, also, Mr. Baldwin has, in some measure, obviated the tendency of the driving wheels to twist upon the axles, and become loose; a very general and troublesome defect of locomotives. Another good effect, resulting from this change, is that the distance between the two cranks is increased about ten inches, which will admit of a corresponding enlargement of the boiler, and of a more advantageous disposition of the weight of the fireplace, by bringing it about fourteen inches nearer the axle. In these engines, the steam pipe is introduced into the boiler through the opening by which it usually communicates between the dome and the cylinders; and the end of the pipe beneath the dome is supported on a horse, fixed within the boiler, so as to admit of its longitudinal expansion and contraction by changes of temperature; and to avoid inconvenience from the same cause, the stop of the throttle valve is fixed on the steam pipe, instead of the head of the boiler. A twofold benefit is derived from this plan of introducing the steam pipe: first, the pipe may be made without a joint within the boiler; and secondly, a man hole in the boiler may be dispensed with; for the juncture between the dome and boiler, as well as all the other steam joints, being accurately fitted by grinding, and formed without any cement, or packing, the dome can easily be taken off and replaced, and its aperture used for occasional access to the inside of the boiler.

In the construction of his driving wheels, Mr. Baldwin uses hubs and spokes of iron, cast in one piece; felloes of hard wood are framed into the ends of the spokes, and the whole is firmly bound together by a stout tire of wrought iron, with a flanch on its inner edge; thus, by a judicious combination of iron and wood, he has united the strength and firmness of the former with the elasticity of the latter, so desirable in the tread of the wheel.

Mr. Baldwin has completed several engines, which combine all these improvements; one of them may be seen in operation on the Philadelphia and Trenton Railroad, and four on the state road to Columbia; all of which, as well as one in use at Charleston, South Carolina, have given entire satisfaction by their performance.

The committee are informed that some of these improvements have been secured to their inventor by patents; and that he richly deserves to reap the benefit of them, will be admitted by any one who is aware of the present extensive use and increasing demand for these costly structures.

By order of the committee.

WM. HAMILTON, Actuary.

February 12th, 1835.

New Method of Working Expansion Valves.

Ovid, N. Y., March 24, 1835.

To the Editor, &c.

Sir,—In No. 8, vol. iv., of Railroad Journal, I observe a new method of working what are commonly called *expansion valves*, by machinery connected with the governor of a steam engine, which deserves credit for its ingenuity, but which appears to me to be quite too complicated to be of any practical utility. On examining the specification of the above, it occurred to me that an expansion valve might be so contrived as to be self-acting; and in carrying out this idea, I concluded that something like the following would operate well, viz.: Let the valve be pretty large, and of the kind called puppet valves—to the spindle of this valve a spring is attached, having a constant tendency to open the valve, which, when open, should be but a little distance from its seat—one or two small holes should be drilled through the valve, or its plate, so as to cause a trifling leakage of steam, and the apparatus is complete. The operation would be as follows: when the engine is standing still, the leakage would cause the steam to press equally on each side of the valve, and the spring would draw it open—when the piston moves, the steam would become somewhat expanded in the cylinder, at about half the length of the stroke—the valve would then be closed by the superior pressure of the steam upon its upper side, and remain closed during the remainder of the stroke—at the end of the stroke there would be a short interval, during which both feeding valves are closed against the steam from the boiler—during this time the leakage would fill the valve-box, and again produce an equilibrium of pressure upon each side of the valve, when it would again open, and again be closed as before. Such a valve would also operate in some measure as a governor.

VIS INERTIÆ.

PRICES OF RAILROAD STOCKS,
At the New-York Stock and Exchange Board,
APRIL 24, 1835.

	Par.	Ask.	Offer.
Mohawk and Hudson	100	128	127½
Paterson	50	113½	113
Saratoga	—	114½	114
Harlem	—	98	98
Boston and Providence	100	123	122
New-Jersey Railroad and Transportation Line	100	123½	123
Camden and Amboy	100	—	—
Providence and Stonington	100	106	106
Boston and Worcester	—	112	111½
Philadelphia and Trenton	100	106	106
Utica and Schenectady	100	121	121
Jamaica	—	110	110

Remarks on the Protection of Copper Sheathing upon Ships' Bottoms. By G. G. Bompas.

It is a well known fact, that when dissimilar metals are placed in contact in a saline, or acid, solution, such as sea-water, they have an electric action upon each other, becoming on the one part positively, and on the other negatively, electrified; the effect of which is destructive of the positive metal. This has been too little regarded in the sheathing of vessels.*

The various metals and alloys employed in the building and sheathing of a ship almost always stand in this electric relation of positive and negative to each other; and if, as is generally the case, the copper sheathing is the positive metal, it will be destroyed with a rapidity proportionate to the degree in which the electric action is excited.

The sheathing nails in common use are prepared of metals in very various proportions, regard being chiefly had to their color and tenacity; and an examination of several specimens has proved them to be as various in their electric relations with copper, as in their composition. They are generally negative to the copper, and consequently promote its corrosion. Numerous experiments have proved that the galvanic action, induced by the contact of such metals, is necessarily destructive of the positive metal; and they satisfactorily explain the irregular duration, and frequently rapid destruction, of the copper sheathing, which is often erroneously ascribed solely to impurity in the copper. If the sheathing of vessels returned from a voyage be examined, the hollows made by the heads of the nails will generally be found filled with crystals of the salts of copper, and the copper itself is often completely corroded through. In an experiment, where copper obtained from H. M.'s dock-yard was employed, and to avoid all error, each sheet was divided in half, one half being nailed to a board with pure copper nails, and the other with different samples of the nails in actual use at different dock-yards; after ten weeks' immersion in the sea at Portsmouth harbor, one half-sheet had lost two hundred and ninety-three grains more than its fellow, a second had lost thirty-two grains more than its fellow, and a third had lost twenty grains more than its fellow half-sheet: but one with nails prepared on the principles recommended in this paper, had lost thirty-four grains *less* than its fellow half-sheet. It is fair to presume that, if sheathing nails similar to the samples had been used with the same copper on a ship, the duration of the sheathing would have been in somewhat the same proportion.

Copper possesses great advantages over the various alloys introduced for sheathing, from its flexibility and toughness, by which it can be applied with facility, and yields to the strain of the vessel, while, by the slow solution of its surface, it very considerably diminishes the foulness from attachment of marine vegetables and animals. The chief objections to it are, its expense—the liability to corrosion, and consequent irregularity and uncertainty of its duration—and its being too soft to be used for nails, without an admixture of such other metals as generally render them negative to, and destructive of, the copper. But it is equally an objection to the other metals and alloys, that they cannot at the same time be sufficiently soft for sheathing, and yet hard enough to drive as nails. These disadvantages may, however, be almost entirely obviated by the plan now proposed.

First, by the use of sheathing nails that shall be compounded of such metals, in such proportions, as are known not to exercise any destructive agency on the sheathing, but, on the contrary, have a tendency to preserve it.

Secondly, by attaching to the sheathing a metal positive to it, which, while itself in the process of being destroyed, shall preserve the sheathing from corrosion. For it is evident that if, when several metals are placed in communication with each other, the most positive will be destroyed, and the others preserved, the application to the sheathing of a more positive metal, or compound, will thus be a protection to it. It is also obvious that the positive metal may easily be so applied, as that its destruction shall in no degree impair the strength of the vessel, or render necessary any general or expensive repairs.

Upon this principle, (the correctness of which he fully established,) Sir Humphry Davy applied masses of zinc, or of iron, of different proportionate surfaces, to the copper to be protected. The result was, that a very strong electric action was excited, and the corrosion and waste of the copper almost entirely prevented. But he found the electric energy so intense, if the protecting metal was in a large proportion, that the copper, by the decomposition of the sea-water, very speedily became covered with an earthy accretion, to which animals and plants adhered; and the sheathing became so foul as materially to impede the ship's progress. On the other hand, if a small proportion of the protecting metal were employed, it was destroyed so rapidly, that the duration of the protection was too short to be of any value. These difficulties induced him to abandon his experiments.

The difficulties which frustrated the attempts of that eminent philosopher have been completely removed by the employment of a compound metal, which differs much less from the copper, in its electric relation, than either iron or zinc. By the use of such a compound, in which the proportions of metals may be varied as required, a larger protecting mass may be employed, a more diffused and uniform electric action produced over the whole surface of the sheathing, and just that protection afforded which shall preserve it from corrosion, without causing foulness.

The protecting metal should be attached upon the sheathing in a longitudinal belt, or band, a few inches wide, according to the size of the vessel, from stem to stern, about the light water line; and in large vessels, an additional band should be attached to the keel. Being in the direction of the passage of the vessel through the water, it will not impede her sailing; if destroyed, it will not injure the ship; and, when necessary, it can be easily removed, and renewed, without disturbing the sheathing.

After repeated and most satisfactory experiments at Portsmouth, under the inspection of the officers of H. M.'s dock-yard, the Lords Commissioners of the Admiralty were pleased to direct that the sheathing of H. M.'s schooner Fair Rosamond should be protected on this plan, preparatory to her sailing for the coast of Africa, where she is now stationed. She was commissioned in May, 1833, and sailed first to Oporto, and afterwards to Africa. No official report has yet been received; but in November, 1833, her copper is stated, on undoubted authority, to have been clean and bright; and by subsequent accounts, it is proved to have continued so, up to the end of March, 1834.

On the whole, it has been proved that, by the adoption of the sheathing nails and protectors, the duration of the copper will be very much extended, and rendered comparatively certain; that such instances of its rapid destruction, as now so frequently occur, will be entirely prevented; and that, so far from the protectors being the cause of foulness, the sheathing will be preserved much more clean and bright than under ordinary circumstances.

Iron, and other metals, or alloys, exposed to sea-water, or acids, whether as iron cables, sheathing, or any other form, may be preserved from rust, or corrosion, on the same principle.—[London Journal.]

* At this very time, an experiment is making in France, by sheathing one half of a ship's bottom with *cuivre bronze*, a metal negative to copper, and the other half with copper, the metals being in contact. It is easy to foresee that the positive metal, the copper, will lose more by corrosion than the negative metal, and thus give an apparent, but deceptive, advantage to the *cuivre bronze*. In one such an experiment already tried, the results of which have been published, the copper had, in fact, sustained more than what would be its average loss, when not connected with the *cuivre bronze*. In all experiments on new metallic sheathings, there should be no *metallic* communication between the metal to be tried and any other.

AGRICULTURE, &c.

Cultivation of the Grape Vine. By Senex. To the Editor of the Quarterly Journal of Agriculture, &c.:

Sir,—Believing the cultivation of the Grape Vine is, at no very distant day, to occupy an important place in American Husbandry, it gives me pleasure to observe some of your correspondents offering their remarks and opinions on the subject. In its present infant state in this country, information is much wanted, and must be very acceptable; it is therefore desirable that those engaged in this interesting pursuit, should, from time to time, mutually communicate their experience. This can be done in no way more conveniently than through your Magazine.

With this view I send you some account of the fate of an experiment made here.

In 1823, a few vines from Long Island were planted in the garden here, and increased by additions from Long Island, New-York, and Albany, in each of the five or six following years. Above sixty plants, under nearly as many different names, were planted, from which twelve varieties were obtained, viz.: five white, five black or violet, and two grey; nine of the kinds ripened their fruit in September, and three never ripened properly. All the above were foreign vines. In 1825, one plant of the Isabella was obtained, which was afterwards increased by cutting. The vines generally came into bearing in the third year from planting; and for two or three years after afforded a considerable supply of fine table grapes. Their success induced me to undertake the establishment of a small vineyard, with the view of obtaining a pure wholesome wine for family use, as from the facts ascertained and made public, regarding foreign wines, the chance of obtaining a pure, unadulterated, and wholesome wine, from abroad, appeared more than doubtful. Accordingly twelve hundred plants, and about half an acre of ground, were prepared for this purpose in 1828, and ready to plant out in 1830. Of these, 1000 were foreign vines, and 200 Isabellas. The mildew, however, had taken place here in 1828 and '29, with very injurious effects, so as to create suspicions as to the propriety of using the foreign vine. These doubts were confirmed by the perusal of Maj. Adlam's Memoir, published about that time, and by ocular proof of their general failure in Pennsylvania and other places. The plants of foreign vines were therefore all thrown away, and only the 200 Isabellas planted, to which nearly 200 more were added the following season. Since that time, and especially during the last four unfavorable seasons, the foreign vines have not been worth their places in the garden. I have therefore only reserved a few of the younger and more healthy plants for future experiment.

The soil and situation of this farm, being mostly a strong clay and low lying, is far from favorable to the vine; the only spots any way favorable and convenient, being some slaty ridges of poor quality. One of these, nearly opposite the front of the house, was selected for the experiment, unfortunately having a public road running between it and the house. In 1832 the vines began to bear, and the error of presenting so tempting an object to public view was now made evident, the fruit being all stolen. In 1833 the plants bore so abundantly that several barrels of wine might have been made; but this trouble was saved—no sooner did the grapes begin to change color, than the sovereign people seemed to consider them as common property. Teamsters, and others of more fashionable aspect, would stop, and without ceremony go over the fence and hedge, and help themselves, sometimes observing, when interrupted, that it was very shabby to scruple so trifling a freedom. In this way the bushes were completely stripped before they were half ripe. Anticipating that trespasses might occasionally occur, a hedge of honey locust had been planted along two sides of it, having in view to complete it round when the success of the experiment should be ascertained, and the extent determined on. The rapid progress, and already formidable appearance of this hedge, gives me a most favorable opinion of it; and under all the circumstances, I have judged it more advisable to abandon the present spot altogether, and begin a new plantation in a less exposed situation. This was done last spring, 1834. Thus four years are lost, and all the plants, trouble and expense, by the simple circumstance of an injudicious choice of situation.

The robbing of vineyards is a grievance not likely to be of a temporary nature. In those districts of Pennsylvania where vineyards have been successfully established, it is found, as I have been lately informed, indispensably necessary to have men to watch them night and day, from the time the fruit begins to change color until the last of it is gathered, a period of about two months. This forms a very serious obstacle to the cultivation of the vine, especially on a small scale, such as farmers or others might be induced to undertake for their own family use, the trouble and expense being too great.

A hedge of locust would certainly be a very great aid. From the experience of the small piece here which has as yet received no clipping or training whatever, I feel quite confident that a hedge of this kind, with only a little attention of training, would, in six or seven years, present a fence very difficult to go over or through. I can therefore confidently recommend the planting of a hedge of this kind as one of the first things that ought to be done in making out a vineyard. Other precautions may be necessary, such as a vigneron's or laborer's house, placed as conveniently as possible, with a good watch dog.

The only vine used in this experiment was the Isabella, which ripens here perfectly within the month of September; and in this respect it may, perhaps, be difficult to find one more suitable to this northern situation, (Saratoga county.) The Troy grape is one of the same description. The Catawba is a beautiful grape, and equally hardy, but later in maturing its fruit, which here attains the beautiful red color that gives it so fine an appearance on a table, where it is also by some preferred to the Isabella, but does not here attain the dark purple color, and rich flavor, which it acquires in Maryland and Virginia. I have lately obtained several other native varieties, which will be in bearing in two or three years, and which it is probable I may send you some account of, if I live so long. In the mean time, I shall only further add, regarding the Isabella, Troy, and Catawba, that they bear the cold or ordinary winters here with little or no injury, but that all of them are hurt more or less by severe winters, such as that of 1830-31, and sometimes killed down to the ground, as in that of 1831-32. My situation, however, is far from a favorable one.

I shall close this rather lengthy communication, by noticing a circumstance that appears to have some bearing on the cultivation of the grape vine. I allude to the temperance cause. I am a member of a temperance society, and have signed its pledge against ardent spirits, and no one can more highly estimate its importance, or more sincerely desire its success, than I do. The question of abstinence from wine is at present under discussion, and has many advocates in its favor; and so far as regards foreign wines, if they are in fact so far adulterated by ardent spirits and other ingredients as they are said to be, and if it is true that the wines of the shops are, for the most part, only whiskey and cider in disguise, then it is right to expose the imposition, and reprobate their use; but this is certainly no sufficient reason for denouncing the pure and wholesome juice of the native vine, and thereby discouraging its cultivation. Ardent spirit is in fact the citadel and great stronghold of intemperance. Destroy that, and the battle is won, as I believe. It appears a hopeless undertaking to persuade the whole community to content themselves with water. This is grasping too much, and may hurt the cause, as a law too severe is apt to defeat its object. It is going to an extreme which I think is not necessary to the success of the cause. As to the native vine, my opinion is in entire accordance with that of the correspondents R. T. and Dr. Dwight, of Hamilton College, stated at p. 117 and 228, vol. 7, of New-York Farmer, that the general cultivation of the native grape, and introduction of its pure and wholesome juice in place of the liquid poisons now in use, would greatly promote, and prove a most powerful auxiliary to the cause of temperance, and a blessing to the world.

I am yours, &c., SENEX.

Feb. 2, 1835.

Manifold Virtues of the Elder Tree.—Sir J. E. Smith has remarked that this tree is, as it were, a whole magazine of physic to rustic practitioners. It is said that if sheep that have the rot can get at the bark and young shoots of elder they will soon cure themselves. The wine made from elder berries is too well known by families in the country to need any encomiums; it is the only wine a cottager can procure, and when well made, it is a most excellent and wholesome drink, taken warm before going to bed. It causes gentle perspiration, and is a mild opiate. If a rich syrup be made from ripe elder berries, and a few bitter almonds, when added to brandy, it has all the flavor of the best cherry brandy. The white elder berries, when ripe make wine much resembling grape wine. The buds and the young tender shoots are greatly admired as pickle. The leaves of the elder tree are often put into the subterranean paths of moles, to drive those noxious little animals from the garden. If fruit trees, flowering shrubs, corn or other vegetables, be whipped with the green leaves of the elder branches, it is said insects will not attach themselves to them. An infusion of these leaves in water is good to sprinkle over rose buds, and other flowers subject to blight, and the devastations of caterpillars.—[Leigh Hunt's London Journal.]

Silk Culture.—The following letter, written by Judge Spencer, relates to a subject of great and growing importance to the people of this country.

M.

CULTURE AND MANUFACTURE OF SILK.

Albany, April 7th, 1835.

To Samuel M. Hopkins, Esq.
Geneva, Ontario county.

From a long acquaintance, and, as I believe, a reciprocal esteem and friendship, I have thought that I could not better employ a leisure hour, than in addressing you on a topic which I regard as of high importance to our fellow citizens. You will not suspect me of insincerity or flattery, when I assure you that I know no man, whom I believe to have more enlightened views, or a more ardent patriotism than you; hence the propriety of my selecting you as a correspondent on the interesting subject which I proceed to state.

Since 1830 my attention has been drawn to the consideration of the culture of silk in this country and particularly in this State. I am perfectly satisfied that no agricultural pursuit will bear any comparison with the culture of silk, as regards profit. I should not want a better income than the clear profits of an orchard of white mulberry trees, of twenty acres, at ten years old—the clear net profits of such an estate would not fall short of from $3000 to $5000 annually; and this profit would go on increasing with the growth of and productiveness of the trees.

You may have seen a communication made by me to the commissioners appointed by the governor, to examine into the economy, government and discipline of the state prisons, which has been published, not however extensively, it contains some matters irrelevant to the culture of silk, and omits some things interesting to those who may embark in the enterprise. You must have observed as a statist, that our annual import of silk amounts to the value of $10,000,000, and will increase with our wealth and population—this amount far exceeds the value of all our bread stuffs exported—this consideration ought to excite us to the enquiry, whether such a drain from the resources of the country cannot be prevented, a new source of industry be opened, which shall in a short period supply our own wants, and enable us to become exporters of either raw silk; or silk fabrics.

I consider it as a fact demonstrated, that our soil and climate is genial to the growth of the mulberry tree, and the culture of silk. Trees of this description are already growing and flourishing in various parts of the state, and I presume that the portion of this state from Skeneatales to Lake Erie, is peculiarly adapted to the mulberry, from the fact that the most delicate fruit trees come to great perfection within that region. Since 1760 the silk worm has been reared in Windham county, Connecticut, which is about the latitude of Albany; the culture of silk has been successfully prosecuted in that county, and it has reached to a large amount. The following is an extract from the Daily Advertiser of the 15th instant: "*American Silk.*—Raw silk, we learn from the Burlington Free Press, has been produced this year in Mansfield, Conn., to the amount of over $60,000. The county of Windham, Conn., produces five tons of silk annually, valued at $500,000, and if reeled would be worth double that sum." If this be true, and that it is substantially true I fully believe, the question is settled that the soil and climate of this state is genial to the culture of silk—it settles also another question, that it is much the most profitable business that can be undertaken.

We have the testimony of Mr. D'Homergue, a man born at Nismes in France, and brought up from infancy to the reeling and manufacture of silk, and who came to this country on the recommendation of the late James Brown, then Minister in Paris, who asserts in his essays that he was surprised to find the American silk superior in quality and the quantity yielded by the cocoons, to any he ever saw. But, my dear sir, could you have seen specimens of American silk exhibited in this city a few days since, manufactured by Mr. Gay, all doubt would be removed. These specimens were pronounced by the many who saw them, to be equal, if not superior, to any silk which had ever been seen here.

Now, sir, what are the impediments to be overcome, in introducing the culture of silk extensively in this state? And here let me observe that there is no danger of over-doing the business; there will always be a demand in England for all we can raise beyond supplying our own wants; where, from the humidity of the climate or other causes, the silk worm is not reared.

It is necessary to devote a small space of good and fertile ground, as a nursery in which to sow the seeds. It is computed that one ounce of seed properly sown, after the ground is thoroughly ploughed, or dug and harrowed, or raked and sown, in drills at about three feet apart, will give about five thousand young tree. They require to be kept free from weeds, and injury from cattle. At two years of age they are generally fit for placing in an orchard at the distance of from 7 to 12 feet at right angles—and here the labor of man terminates, all the subsequent culture may be conducted by women and children—they pluck the leaves, and feed and tend the worms until the cocoons are formed; so that you perceive the culture of silk detracts nothing from agriculture. The greatest embarrassment hitherto has been the extracting or reeling the silk from the cocoons. The reels of France and Italy, and indeed of all parts of the world, receive the thread which consists of the fibres of several cocoons accorcing to the requirement of the fabric to be made, in skeins, which must be spooled before it can be twisted. Two of our countrymen, Messrs. Gay and Mosely, have invented a real which receives the thread on spools, and thus the labor and wastage of the old process is avoided. Mr. Gay assures me that an ingenious woman can be taught in a short time to reel on his reel with great perfection. A great advantage of reeling on to spools consists in its safe any easy carriage any distance without injury. We have, therefore, surmounted the most difficult process in the whole operation.

These gentlemen have also employed the several machines in use in France and England in the manufacture, so that it will require but a comparatively small capital to establish manufactories of silk in this country.

When we consider how admirably adapted to silk are our County Poor-House establishments, how the wants of the poor may be mitigated by inducing them also to enter on the culture, by obtaining leaves of the mulberry from their rich neighbors; how the middle classes of society may improve their condition by entering on the culture of silk; I feel, I confess, a strong desire to be able to persuade people to lose no time in laying the foundation of their culture by immediately setting about it in earnest, and not to let any thing hinder them from sowing the mulberry in the manner indicated this spring.

The *morusalba* or white mulberry I am satisfied is the most proper for making the best silk; the purple mulberry, which is indigenous to some parts of our country, although it will make silk, yet it is not of as good a quality. The *morus multicanlis* or Chinese mulberry, has recently been introduced into this country, but it is apprehended that it will not withstand our vigorous winters; and as the common white mulberry will withstand them, and make excellent silk, I should not recommend the propagation of the Chinese.

I forbear saying any thing on the mode of rearing the worm. I am satisfied that it does not require the care and pains to rear it in this country which the precepts of Count Dandalo would imply. In due time instructions will be given level to every capacity. May I not count on your co-operation in this most important subject.

With sincere respect and esteem,
Yours, A. SPENCER.

Lake Erie Navigation.—The Dunkirk Whig, of April 14th, says, that "the Lake as far as can be seen from this place is clear of ice, and there is now no obstruction to a free navigation from this up the Lake. The steamboat William Penn, Captain Dwight, from Cleveland, is expected at this port every hour, to start for Detroit."

We hope soon to hear a similar announcement in relation to the Lake at Buffalo. It will give new life to business in that flourishing city.

There are several Steam Boats running regularly between this and the upper ports. Passengers wishing to go west may obtain passage almost any day. These boats will continue to run regularly from this port until the ice is out at the lower end of the lake.—[Erie, Pennsylvania, Gazette.]

[*From the Sacket's Harbor Courier of April* 14.]

The Steamboats United States, Oswego and Wm. Avery, have commenced running—the two former between Ogdensburg and Lewiston, and the latter between Ogdensburg and Rochester.—The Oswego, Capt. Homans, made her first appearance in our Harbor on Saturday last; and the United States, Capt, Van Cleve, and the Wm. Avery, Capt Read, came in and left on Sunday afternoon and evening. They all appear to be in excellent condition, and if we may judge from appearances, we should say that their prospects for a good summer's business, are extremely flattering.

Improvement of the Navigation.—It will be perceived by the following letter, from the Secretary of War, addressed to the Mayor, that our citizens may count upon an early commencement and steady prosecution of the plan for the improvement of the navigation of the Hudson river. This information will be received, we are sure, with gratification by all who are desirous to promote the interests of the city, and to facilitate the transaction of the great business operations of the State, and indeed of other and far western States, which seek through this channel a market for their surplus products. —[Albany Argus.]

War Department, April 14th, 1835.

Sir,—Your letter of the 11th inst. has just been received.

Capt. Talcott was some time since directed to superintend the improvement of the Hudson River. Nor is it in the contemplation of this Department to assign to him any other duty, inconsistent with this arrangement.

I understand from Gen. Gratiot, that Capt. Talcott is awaiting the decision of this Department on the question of the mode of disbursing the funds appropriated for this object, before he commences the work. The point is a new one, and has been recently made in consequence of an act passed at the last session of Congress. A course has, however, been adopted which will probably remove the difficulty, and ensure the prosecution of the improvement without delay.

Very respectfully, your most ob't serv't,
LEW. CASS.

E. Corning, Esq. Mayor of Albany.

Canal Navigation.—The Erie canal from Albany to Buffalo, was filled with water on the 15th of April. A great number of boats have already cleared with heavy freights of merchandise for the west. The tolls paid at this place during the three first days amount to about seven thousand dollars.—Several boats arrived at this place on Saturday from Utica: and the packets have commenced their regular trips from Schenectady to Utica.

A letter from the superintendent of the northern section of the Champlain canal, dated at Sandy Hill on the 17th, states that the water was let into the canal on his section, on the 14th, at night, and on the 15th the levels were as full as were considered safe, "with the great quantity of frost yet remaining in the banks of the canal. There were small breaches immediately after letting in the water in the vicinity of Whitehall, between the guard gate and the head of the upper lock: If we can save the other portion, it will be more than can reasonably be expected.—Watchmen are kept constanly on the line, and will be, until the frost shall have disappeared."

A letter from the collector at Dresden, of the 14th instant, states that the water would be let into the Crooked Lake Canal on the 15th; and it is presumed that the Oswego, the Cayuga and Seneca, and Chemung canals, were all in a navigable condition on the same day.

There is some frost in the canal banks between Albany and Utica, and there has been an apprehension of breaches from this cause: but none have happened. There has been a slide into the canal, about eight miles this side of Schenectady, but not to such an extent as to prevent the passage of boats.—[Argus]

Chesapeake and Ohio Canal.—We have just received the following interesting information from a friend, whose official situation enables him to be well acquainted with every thing connected with the Canal.—[National Intelligencer.]

"I have now the pleasure of informing you

that a number of boats, loaded with Flour, Coal &c., have reached the District from Cumberland, having passed through one hundred and eight miles of the Chesapeake and Ohio Canal. It is matter of congratulation that so much of the Canal is open for use, as it is, that the prospect is fair, for its early completion to Cumberland. A great amount of trade is now on its way down the Canal; though it has been detained for some days by one of those occurrences common to the use of a new Canal, and which I anticipated when I last addressed you—I mean a breach in the embankment. This has been repaired and the use of the Canal restored."

Grand Junction Canal.—We congratulate our fellow citizens upon the ascertained certainty of the immediate construction of this important work the union of the Pennsylvania and Ohio Canals, by the Mahoning Valley. The necessary charters having been obtained from the respective legislatures of the two states, the commissioners will open the books to dispose of the balance of the stock, on Monday next, agreeably to their notice in our advertising columns.

Of the importance of this work to Philadelphia and Pennsylvania, nothing need be said to those who know its location. To those of our citizens who are not conversant with the subject, we would just remark, that the great line of Pennsylvania canal terminates within about six miles of the Ohio state line, the Beaver divison having been completed the last season.

From thence to the Ohio canal is 79 miles, along the valleys of the Mahoning and Coyahoga rivers. The Pennsylvania and Ohio canals will thus form the junction of the improvements of the two states on the great western line, and will be the avenue of communication between the Atlantic and the fair fertile west. It is gratifying to add, that repeated explorations by the most distinguished engineers, have shown the route to be most eligible in every respect, and especially that there will be an abundant supply of water from the natural streams.—[U. S. Gaz.]

[*From the Pittsburgh Gazette.*]

COLLECTOR'S OFFICE,
Allegany, W. D. Pa. Canal, April 11, 1835.

Whole amount received from 1st November, 1834, to April 4, 1835, as per last weekly statement,	$4,741 55 1-2
Amount received in the week ending April 10,	799 43
Whole amount received to April 11, 1835,	$5,540 98 1-2
Sixty-one boats cleared from this office, having tonnage,	971,874 lbs.
Tonnage received from the East, cleared at other offices,	2,170,150 lbs.
Total tonnage of the week,	3,142,024 lbs.

Extras.—Wood, 21 1-4 cords; Boards, 9,251 ft; Locust Posts, 100.

Our Railroad its progress and prospects.—Stockholders and others interested in this important work, (and who in this community does not feel an interest in it?) will be pleased to learn, that the graduation is now finished from Harper's Ferry to Winchester—that a large proportion of the necessary timber is delivered or prepared for delivery—and that arrangements have been made for procuring the iron and locomotives without further delay. Contracts have been closed and are now in the progress of execution, for laying the rails and finishing the entire work, out and out, by the first of November next—early enough to affect the price of the growing crop. Nothing is wanting to secure this happy result but attention on the part of the stockholders to the calls of the board. The instalments must be paid, or the work must necessarily languish. The stockholders will find new encouragement to diligence and punctuality in this matter of paying up, in the fact, that the stock of the Baltimore and Ohio railroad, which, while that work was unfinished, had fallen to one-third of its nominal value, has now, that the road is done suddenly risen to par—and in the further fact, that the stock of every finished railroad in the United States is above par.—[Winchester Republican.]

The Portland Argus says:

The Hon. John Anderson, of this city, and Peter H. Green, Esq. of Bath, have been appointed by the Governor and Council, Commissioners to visit Quebec, for the purpose of conferring with the authorities there upon the advantages to be derived from a Railroad from this State to that city.

We are happy to learn that gentlemen so well qualified to estimate the probable benefits to be derived from the spled project in contemplation, are appointed to collect the necessary information relative thereto. Mr. Anderson's long and intimate acquaintance with the commercial interests of this State, and his high character for honor and integrity, will recommend him favorably to the British Government in Canada, and will give weight and influence to his suggestions. Mr. Green also is well acquainted with our local concerns; and we doubt if a selection more favorable to the accomplishment of the object in view, could have been made.

Teams versus *Steam.*—Quite an animated contest has been carried on for several weeks past between those enterprising mail coach proprietors *Stockton* and *Stokes*, and the *Baltimore* and *Ohio Railroad Co.*, in the transportation of passengers between this city and Baltimore, which has caused considerable excitement among our citizens, who watch the arrival of cars and stages with much interest. On one day the stage will arrive full of passengers, at a slapping pace, full thirty minutes before the cars—the next, they come out neck and neck—or rather neck and boiler—on the third the steamer is ahead and dashes on to the depot like a thunder cloud with a streak of lightning attached to it—or a dog with a tin pot tied to his tail. "Hurrah Stokes!" "Hurrah Steam!" are now screamed out from many a throat, with as much fervor as ever was the battle cry of Richard Cœur d'Lion. How long this steam and team contest will last we cannot say—for one of the parties seems to delight in hot water, and the other is determined not to break down whilst a wheel is left between this and Wheeling. But little we reck if it is continued as long as the Trojan war, for it is rife with benefits to the editors on the route and enables us to receive the Eastern mail some hours sooner than formerly.

The opposition of Messrs. Stockton and Stokes was caused by what they deem an extravagant demand by the Railroad Company for carrying the mail between Frederick and Baltimore. As to the merits of the case we know nothing; but we learn that the experiment of Messrs. Stockton and Stokes has been thus far liberally patronized and bids fair to continue to be so.—[Frederick, Md., Herald.]

Heavy Penalty.—The Supreme Court of Massachusetts has confirmed a late decision of the Court of Common Pleas, by which a Mr. Currier recovered a verdict against the town of Lowell. The suit was brought against the town to recover damages for an injury sustained by Mr. Currier in consequence of the badness of a road which the town was bound to keep in repair. The jury returned a verdict of $3,500, which was doubled by the Court, according to the provisions of the statute, thus giving to the plaintiff the very snug and respectable sum of seven thousand dollars. The "Select Men" of Lowell will probably see the necessity, hereafter, of keeping their highways and bridges in better order.—[Courier.]

One part of the London and Greenwich Railroad, which is now advancing towards completion, will *go over three thousand arches;* and it is intended to make these arches to serve the purposes of cottages, and that they shall be inhabited. This is certainly a novelty, and one of an agreeable character, that carriages full of passengers and goods will *go over the tops of human habitations* at great speed, with the most perfect security and convenience to all parties. To get clear of all smoke arising out of those residences of men and women, which would be a great annoyance on the Railroad, the apartments or arches will be warmed by gas stoves, which will yield light and heat without impregnating the atmosphere with any noxious impurity—[Lon. paper.]

India Rubber Boat.—We have had the pleasure of examining this ingenious production, soon after its return from a most fortunate *trouting* expedition to Martha's Vineyard. The boat was invented, says the Providence Journal, by Mr. Caleb Williams, Jr., of this city, and was manufactured at the India Rubber Factory on Eddy's Point. It is constructed very much upon the plan of Burden's steamboat, with two inflated cylinders of India rubber cloth, connected upon the top by five or six beams of light portable plank, which supports a deck of boards, which may be procured at almost any place where the boat is to be used. The whole apparatus weighs about 20 pounds. The cylinders may be both inflated in from 5 to 10 minutes, and when the air is discharged may be folded into a valisse. The rest of the apparatus may be conveniently carried in the bottom of a wagon or chaize. In addition to the whole, is a seat, upon which the angler may sit and hold his dominion over the finny race. This boat will sustain at least one ton's weight, and of course by enlarging the deck, would accommodate quite a party. The elasticity of the cylinders has been proved to be a protection against their being punctured by snags and rocks. We understand the ingenious contriver has applied for a patent for his invention.

National Importance of the Cotton Manufacture.—The cotton manufacture arose in this country at a critical period of our history. England had just lost her American colonies; but that loss was more than compensated by this new source of prosperity springing up at home. The genius of our mechanics repaid the errors of our statesmen. In the long and fearful struggle which followed the French revolution, this country was mainly supported by its commerce; and the largest, though the newest branch of that commerce, was furnished by the cotton manufacture. To Arkwright and Watt, England is far more indebted for her triumphs than to Nelson and Wellington. Without the means supplied by her flourishing manufactures and trade, the country could not have borne up under a conflict so prolonged and exhausting. In the article of cottons alone, the exports amounted, between 1793 and 1815, to 250,000,000*l.* From 1816 to 1833 inclusive, the declared value of the cotton exports was 306,167,518*l.* Within the last half century, cottons to the enormous value of 570,000,000*l.* have been sent from this country to foreign markets. It is obvious that a trade of this magnitude must have contributed largely to sustain the revenue, to prevent the national resources from being intolerably oppressed by taxation, and therefore to uphold the power and guard the tranquillity of the state.—*Baine's History of the Cotton Manufacture.*

It is now believed that volcanic action was the instrument of the destruction of Sodom and Gomorrah. The Azores, Madeira, Canary Islands, Cape de Verds, St. Helena, Tristra D'Achuna, and the Isles in the Indian Ocean—particularly Bourbon, give evidence that they were of volcanic origin. Also the large islands of Java, Sumatra, Borneo, &c., with the Phillipines, are evidently a continued range of volcanoes. The islands in the West Indies are also of volcanic basis; and South America is subject to earthquakes, which always attend, and generally precede volcanoes.

The Bell Rock Light House.—We learn that this work has been subjected to greater damage during the late gales than ever before since its erection. The spring tides in January rose to 116 feet and drifted over the buiding, while in ordinary tides 19 feet is the extent of their rise. The heaviest ground swell preceded the heaviest wind two days. Some large rocks called "travellers" were thrown up from the deep by the "yesty flood," weighing 5 1-2 tons!

During the last year there were born in Paris 29,130 children, namely—14,904 males, and 14,220 females. Of these 19,145 were legitimate; 18,685 of them being born in private houses, and 460 in hospitals or almshouses; 9,985 were illegitimate, 5,473 of whom were born in private houses, and 4,512 in hospitals. Of the natural children, 1,170 were acknowledged by their parents. The deaths amounted to 24,177; namely, 12,004 males, and 12,178 females. Of these 15,340 died in their own houses, and and 8,887 in the hospitals. The number of births exceeded that of the deaths by 4,953. The marriages were 8,088. In 1833 there were 27,460 births; 25,026 deaths, and 7,938 marriages.

NEW-YORK AMERICAN.

APRIL 18—24, 1835.

LITERARY NOTICES.

TEMPERANCE ALMANAC.—PACKARD AND VAN BENTHUYSEN, Albany.—This useful publication, which has, and ought to have, a most extensive circulation, is published under the superintendance of the executive committee of the New York State Temperance Society.

It is furnished at $12,50 per thousand, and contains facts well calculated to make men feel the importance and necessity of abstinence from strong drink.

By it we perceive that in the jails and poor houses in this state in 1833 there were confined 24,169 persons, of whom 18,312 were certified by the keepers to be intemperate in their habits, only 2,366 temperate, and 3,491 doubtful.

This is a startling fact, though a reflecting mind would have supposed no other result.

The footsteps of the drunkard, however devious elsewhere, are always *steady and undeviating* in the downward path to poverty, crime, and disgrace. A.

THE LANGUAGE OF FLOWERS: Carey, Lea & Blanchard, 1835.—This beautiful volume contains a historical account of the symbolical language of the garden, together with the meaning of flowers as at present generaliy ascepted. Here the reader may find the reason why the Mergauthum is the emblem of repose, the Thyme of activity, and the Geranium of stupidity. Why honeysuckle represents the bonds of love, and the broken straw the painful rupture of these bonds.

It is full of curious and interesting learning, and its typographical execution, reflects credit on the printing art in Philadelphia. A.

THE YEMASSEE: A Romance, in 2 vols., by the author of Guy Rivers.—HARPERS.—This is no common book. The design of the story is bold and original, and its execution is graphic and vigorous. The writer has improved amazingly since his last effort, and though there is still room for improvement, yet this work must establish him in an enviable rank among living writers. His chief defect is a too great indulgence in those metaphysical disquisitions which were so often misplaced in the mouths of his characters in Guy Rivers. In the present work these are very properly put forth as the views of the author speaking in his own person, but though often ingenious, and sometimes beautifully written, they do not seem alway to grow out of his subject, and they are often so unskilfully introduced as to delay the action of the story, and consequently impair the interest of its finest scenes. Mr. Simms has evidently two distinct complexions to his mind, and we should like to see him try his hand at a novel of the Godwin and Brockden Brown school, if it were only to find a new outlet for those kind of speculations which appear to us out of place in a pure Romance like the Yemassee. It is one thing for a writer to stamp his peculiar mind and character upon his productions, and it is another thing to send all the coin from his intellectual mint with precisely the same impress. It was well enough for our author on his first appearance, to give the public a fair taste of his different powers, but we hope that hereafter he will take different and separate works in which to display his versatility; and whether his next book "turn out a song or a sermon" an exercise of discrimination in this regard will much improve its character.

The Yemassee we think displays as much power, fancy, and original resource as any work of fiction, by a native writer, that we can call to mind. The author has succeeded admirably in wakening a noble and extinct race of Indians, to life, in the deep forests of the south; and the gallant cavaliers who settled his native Carolina not less than to the plumed chieftains of a hundred years ago, are made to flit with magical reality before the mental gaze of the reader.—There is, indeed, a warm tissue of poetry, pervading the whole work—an atmosphere of fancy, which raises the ideal creatures of the author's brain, somewhat above actual life, but which makes them gain in poetic vitality, all that they may lose in truth. The writer has evidently proposed to himself that master-piece of *unmeasured* poetry, (the only perfect romance, except Fenelon's *Telemaque*, that ever was written,) Ivanhoe,—as his model; and we only wish that he had not introduced a single touch to remind us of the ordinary novel. His attempt has been a bold one; to say that he has been perfectly successful, would be to rank his work with those two great prose epics, as they have been called, and would provoke a comparison most unjust to a writer "yet in the gristle of his youth." But to say that his production is indicative of more than mere literary talent—that it betrays the decided possession of genius—of peculiar and creative powers, will hardly be thought sufficient commendation by those who carefully peruse the Yemassee.

The following quotation is a fair specimen of the materiel of the work, and the mode in which it is wrought up.

The day had been gratefully warm; and, promising an early summer, there was a profitable show of foliage throughout the forest. The twittering of a thousand various birds, and the occasional warble of that Puck of the American forests, the mocker—the Cooneclatee, or Trick-tongue of the Yemassee—together with the gleesome murmur of the zephyr and brook, gave to the scene an aspect of wooing and seductive repose, that could not fail to win the sense into a most happy unconsciousness. The old oaken grove which Bess Matthew, in compliance with the prayer of her lover, now approached, was delightfully conceived for such an occasion. All things within it seemed to breathe of love. The murmur of the brooklet, the song of the bird, the hum of the zephyr in the tree-top, had each a corresponding burden.

* * * * *

"He does not come—he does not come," she murmured, as she stood contemplating the thick copse spreading before her, and forming the barrier which terminated the beautiful range of oaks which constituted the grove. How beautiful was the green and garniture of that little copse of wood. The leaves were thick, and the grass aronnd lay folded over and over in bunches, with here and there a wild flower, gleaming from its green and making of it a beautiful carpet of the richest and most various texture. A small tree rose from the centre of a clump around which a wild grape gudded luxuriantly; and, with an incoherent sense of what she saw, she lingered before the little cluster, seeming to survey that which she had no thought for at the moment.—Things grew indistinct to her waudering eye—the thought was turned inward—and the musing spirit denying the governing sense to the external agents and conductors, they failed duly to appreciate the forms that rose, and floated, and glided before them. In this way, the leaf detached made no impression upon the sight that was yet bent upon it; she saw not the bird, though it whirled, untroubled by a fear, in wanton circles aroundher head—and the black-snake, with the rapidity of an arrow, darted over her path without arousing a single terror in the form that otherwise would have shivered but at its appearance. And yet, though thus indistinct were all things around her to the amusing mind of the maiden, her eye was singularly impressed with one object, peering out at intervals from the little bush beneath it. She saw or thought she saw, at moments, through the bright green of the leaves, a star-like glance, a small bright ray, subtile, sharp, beautiful—an eye of the leaf itself, darting the most searching looks into her own. Now the leaves shook and the vines waved elastically and in beautiful forms before her, but the star-like eye was there, bright and gorgeous, and still glancing up to her own. How beautiful—how strange, did it appear to the maiden. She watched it still with a dreaming sense, but with a spirit strangely attracted by its beauty—with a feeling in which awe and admiration were equally commingled. She could have bent forward to pluck the gem-like thing from the bosom of the leaf in which it seemed to grow, and from which it gleamed so brilliantly; but once, as she approached, she heard a shrill scream from the tree above her—such a scream as the mock-bird makes, when, angrily, it raises it dusky crest, and flaps its wings furiously against its tender sides. Such a scream seemed like a warning, and though yet unawakened to full consciousness, it repelled her approach. More than once, in her survey of this strange object, had she heard that shrill note, and still had it carried to her ear the same note of warning, and to her mind the same vague consciousness of an evil presence. But the star-like eye was yet upon her own—a small, bright eye, quick like that of a bird, now steady in its place and observant seemingly only of hers, now darting forward with all the clustering leaves about it, and shooting up towards her, as if wooing her to seize. At another moment, riveted to the vine which lay around it, it would whirl round and round, dazzling bright and beautifully, even as a torch, waving hurriedly by night in the hands at some playful boy;—but, in all this time, the glance was never taken from her own—there it grew, fixed—a very principle of light—and such a light—a subtle, burning, piercing, fascinating light, such as gathers in vapour above the old grave and binds us as we look—shooting, darting directly into her own, dazzling her gaze, defeating its sense of discrimination, and confusing strangely that of perception. She felt dizzy, for, as she looked, a cloud of colours, bright, gay, various colours, floated and hung like so much drapery around the single object that had so secured her attention and spell-bound her feet. Her limbs felt momently more and more insecure—her blood grew cold, and she seemed to feel the gradual freeze of vein by vein, throughout her person.—At that moment a rustling was heard in the branches of the tree beside her, and the bird which had repeatedly uttered a single cry, as it were of warning, above her, flew away from his station with a scream more piercing than ever. This movement had the effect, for which it really seemed intended, of bringing back to her a portion of the consciousness she seemed so totally to have been deprived of before. She strove to move from before the beautiful but terrible presence, but for a while she strove in vain. The rich, star-like glance still riveted her own, and the subtle fascination still kept her bound. The mental energies, however, with the moment of their greatest trial, now gathered suddenly to her aid; and, with a desperate effort, but with a feeling still of most annoying uncertainty and dread, she succeeded partially in the attempt, and leaning backwards against the neighbouring tree, feeble, tottering, and depending upon it for that support which her own limbs almost entirely denied her. With her movement, however, came the full development, of the powerful spell and dreadful mystery before her. As her feet receded, though but a single pace to the tree against which she now rested, the audibly articulated ring, like that of a watch when wound up with the verge broken, announced the nature of that splendid yet dangerous presence, in the form of the monstrous rattlesnake, now, but a few feet before her, lying coiled at the bottom of a beautiful shrub, with which, to her dreaming eye, many of its own glorious hues had been associated. She was conscious enough to discriminate and to perceive, but terror had denied her the strength necessary to fly from her dreadful enemy. There still the eye glared beautifully bright and piercing upon her own; and, seemingly in a spirit of sport, he

slowly unwound himself from his coil, then immediately, the next moment, again gathered himself into its muscular masses—the rattle still slightly ringing at intervals, and giving forth that paralyzing sound, which, once heard, is remembered forever. The reptile all this while appeared to be conscious of, and to sport with, while seeking to excite her terrors. Now, with its flat head, distended mouth, and curving neck, would it dart forward its long form towards her,—its fatal teeth, unfolding on either side of its jaws, seeming to threaten her with instantaneous death, while its powerful eye shot forth glances of that fatal power of fascination, malignantly bright, which, by paralyzing with a novel form of terror and of beauty, may readily account for the spell it possesses of binding the feet of the timid, and denying to fear even the privilege of flight.—Then, the next moment, recovering quickly, it would resume its folds, and with arching neck, which now glittered like a bar of brazed copper, and fixed eye, continue, calmly as it were, to contemplate the victim of its secret venom—the pendulous rattle still ringing the death note as if to prepare the conscious mind for the fate which is at hand. Its various folds were now complete—the coil forming a series of knots—the muscles, now and then, rising rigidly into a hill, now corded down by the pressure of another of its folds into a valley. These suddenly unclasping, in the general effort to strike its enemy, give it that degree of impetus which enacles it to make its stroke as fatal, at the full extent of its own length, as when, suddenly invaded, its head is simply elevated and the blow given.

The glance of Bess Matthews at this moment upon her enemy, assured her that the sport of the deadly reptile was about to cease. She could not now mistake the fearful expression of its eye. She strove to scream, but her voice died away in her throat. Her lips were sealed—she sought to fly, but her limbs were palsied—she had nothing left of life but its consciousness; and in despair of escape, with a single scream, forced from her by the accumulated agony, she sunk down upon the grass before her enemy—her eyes, however, still open, and still looking upon those which he directed forever upon them. She saw him approach—now advancing, now receding—now, swelling in every part with something of anger, while his neck was arched beautifully like that of a wild horse under the curb; until, at length, tired as it were of play, like the cat with its victim, she saw the neck growing larger and becoming completely bronzed when about to strike—the huge jaws unclosing almost directly above her, the long tabulated fang, charged with venom, protruding from the cavernous mouth—and she saw no more! Insensibility came to her aid, and she lay almost lifeless under the very folds of the monster. In that moment the copse parted,—and an arrow, piercing him through and through the neck, bore his head forward to the ground, alongside of the maiden, while his spiral extremities, now unfolding in his own agony, were actually, in part, resting upon her person. The arrow came from the fugitive Occonestoga, who had fortunately reached the spot, in season, on his way to the Block House. He rushed from the copse, as the snake fell, and with a stick, fearlessly approached him where he lay writhing upon the grass. Seeing him advance, the courageous reptile made an effort to regain his coil, while shaking the fearful rattle violently at every evolution which he took for that purpose; but the arrow, completely passing through his neck, opposed an unyielding obstacle to the endeavor; and finding it hopeless, and seeing the new enemy about to assault him, with something of the spirit of the white man under like circumstances, he turned recklessly round, and striking his charged fangs, so that they were riveted in the wound they made, into a susceptible part of his own body, he threw himself over upon his back with a single convulsion, and, a moment after, lay dead upon the person of the maiden.

SUMMARY.

Aristocratic Literature.—The Hon. Mrs. Norton has undertaken the editorship of *The Keepsake* for next year, and is assisted, we understand, by several of her aristocratic friends in the arduous duties of preparing this publication for the forthcoming season.

"It is probable," says Humboldt, "that the higher parts of the Kingdom of Quito, and the neighboring Cordilleras, far from being a group of distinct islands, constitute a single swollen mass, an immense volcanic wall, stretching from south to north, the crest of which exhibits a surface of more than six hundred square leagues.—Cotopaxi, Tungura, and Pichincha, are placed on this immense vault, and are to be considered rather as the different summits of one and the same volcanic mass, than as distinct mountains.—[American Monthly.]

Important.—Mons. Paulin has invented a fire proof apparatus, by which firemen may descend into cellars and other places, where spirits and other inflammable substances are in conflagration; being supplied with air pumped into tubes communicating with the head and mouth. A successful experiment was made, but the fireman experienced some inconvenience from the heat during the 19 minutes he remained amidst the smoke—his pulse when he came out of the cellar beating 130 a minute, but he had successfully extinguished the fire. This seems to be the application of the diving bell principle.

Essence of Milk.—A preparation bearing the name of *lactoline* has just been presented to the Paris Academy of Sciences. Mingled with nine tenths of water it yields new milk of the best sort, and with the proper flavor. Lactoline is procured from pure milk, principally by evaporation without heat; and it is said that the globules, when examined by high microscopic power, are found to have undergone no change. When once formed, it remains unaltered by heat or moisture. —[Medical Gazette]

The National Inteligencer says that the citizens of Mecklenburg county, North Carolina, are making extensive arrangements for celebrating the anniversary of the Declaration of Independence which was adopted by the people of that country, in bublic assembly, in the town of Charlotte, one the 20th of May, 1775, more than a year prior to the declaration by Congress in July, 1776.

To the Editor of the Whig:

The questions have been asked me whether any one might lawfully keep an Inn where no spirituous liquors were kept for sale, without a license; also whether the Commissioners of Excise can in their discretion refuse licenses to taverns selling ardent spirits. While revolving these questions in my mind and preparing an answer to them, the following opinions from very high legal authority came opportunely to hand. They will be considered, I apprehend, as settling the question in the most conclusive manner; and as the subject is one of great importance to the public, and particularly to the Commissioners of Excise, I solicit the publication of the following documents in your next paper. By so doing you will greatly subserve the cause of morality and good order, and greatly oblige A Friend.

Utica, April 4.

Legal opinions in relation to the Right to keep a Public Inn without license, and the duty of the Boards of Excise.

I have been desired to state my opinion in writing on two points growing out of the title of our statute regarding "Excise and the Regulation of Taverns and Groceries," 1st vol. Revised Statutes, pages 677—viz:

1st. Can a public inn be kept without license?

2d. Can the Commissioners of Excise refuse to grant any tavern license whatever, if they think that none is necessary?

After the clear opinion given by his Honor, Chief Justice Savage, on one of these points, it seems not very fitting for a member of the bar to say much in addition to it. I will, therefore, state one or two considerations only, and that briefly.

The business of an innkeeper is to keep a public house for the entertainment of travellers.—It is a public employment at common law; and by the common law, long before any statute existed on the subject, innkeepers had peculiar, well established rights, and were under peculiar liabilities.

As the business of innkeeper did not originate in any statute, so it continues by the State Constitution a part of the common right of the citizen, unless restrained by statute.

There is no provision in any part of our revised statutes, (nor was there in our late statutes,) which at all restrains the right of keeping an inn. Any citizen may set up a public inn if it be not a nuisance. He may receive travellers, charge for entertainment, give any credit he pleases, and detain property as security for his bill. On the other hand, he is under so strict a liability to his guest, that even robbery, fire or rebellion, will not excuse him for the loss of a lodger's effects. There is no prohibition, nor penalty in the law, for any act he may do in the regular way of innkeeping, though he have no license.

But without a license he cannot sell the liquors for which an excise is required by the statute.

The business of retailing spirituous liquors, if carried on in an inn, turns it into a tavern. It is this selling which is so strictly regulated by our law. And if a man has a license for a tavern, he must keep an inn also, because the statute has so ordained. But if he will keep an inn, he may do it without keeping a tavern.

The second question is in substance, whether the Commissioners are obliged to grant at least some licenses.

All the regulations in this title, are regulations of careful, anxious restriction. They all plainly refer to the retailing of spiritous liquors as a great evil which is to be restrained as far as possible. The law does not say, nor imply, that any licenses *shall* be granted; and it states many limitations and exceptions according to which they shall not be granted. The whole scope of the law is to restrain, regulate and diminish the business.

As one example among others no license can be granted unless absolutely necessary for the actual accommodation of travellers. It must not be granted on the ground of merely *some* convenience, nor for *uncertain* accommodation, nor for the accommodation of any at all except travellers.

The neighbors near an inn can not be travellers there, and the law does not allow a tavern for the accommodation of the neighborhood.

As by this restraining law, no license can be granted except it be absolutely necessary, nor except it be so for travellers, and for their actual accommodation,—so the Commissioners can not duly grant the license unless they are satisfied of all the points mentioned in the 6th section, and among them, that a tavern is thus necessary. If there is no place in the town where the Commissioners are satisfied that a tavern is actually, absolutely necessary for travellers, then no license can be granted by such Commissioners in the conscientious discharge of their duty. They must be so satisfied in their own minds before they can grant a license.

As petitions are often circulated to influence the Boards, it may be proper to mention that the duty of judging in these cases is cast upon the commissioners themselves, and they have no right to throw the responsibility upon any other persons whatever. If the commissioners are not satisfied that a tavern is absolutely necessary for the accommodation of travellers, they are in duty bound to refuse the license, without regard to the numbers or influence of those who may request it to be granted.

Samuel L. Hopkins.

Geneva, 19th March, 1835.

I concur in the opinion, that a public inn may lawfully be kept without license, and that the commissioners of excise may lawfully refuse to grant any tavern license whatever, if they think that none is necessary.

Nat. W. Howell.

I am of opinion that under the statute 1st Revised Laws 677, any person may keep a house of entertainment, without a license, provided he abstains from selling strong and spirituous liquors and wines; and that the commissioners of excise may not only lawfully refuse to grant any tavern license if they think none to be necessary; but that they exceed their powers and violate their duties if they grant licenses that are not absolutely necessary for the actual accommodation of travellers. A. Spencer.

We concur in the preceding opinions of Judge Spencer. John Savage.

Jacob Sutherland.

Serious Disaster on the Railroad.—The passengers by the Railroad Line from Philadelphia, did not arrive in New York, yesterday afternoon till 5 o'clock, having been detained on the road by a serious disaster, the particulars of which we have learned from one of the passengers, and are as follows:—

About six miles this side of Bordentown, the baggage car, which is always next to the locomotive, was discovered to be on fire, having caught from the sparks from the furnace. The engine was immediately stopped, and every exertion was made that the circumstances of the case would admit, to arrest the progress of the flames, but, we regret to state, that the greater part of the passengers' baggage was destroyed before the flames could be controlled. Our informant states, that when the fire was first discovered, the flames appeared to issue from the very centre of the baggage; the car was in a few seconds completely enveloped in a sheet of fire, and the wind being very high at the time, it burnt with great fury. The flames also communicated to one of the half-price cars, which was slightly damaged.

Among the passengers who were the greatest sufferers, were Mrs. R.—e, of Boston, and Mrs. Austin, of the Theatre. The former lost a large quantity of valuable clothing, worth *fifteen hundred dollars*, but fortunately saved her diamonds and other jewellery. Mrs. Austin also lost all her bag gage, including many valuable articles of dress, but saved a box of jewels which was providentially taken from the centre of her trunk.

A German gentleman and his wife who lost all their clothing, were fortunate enough to recover a tin box, which was in one of their trunks, containing documents necessary for the recovery of a large estate in Europe, wither he is proceeding for that purpose.

Mr. Knowles, of Amherst, Mass. had a package in his trunk, containing $15,000, which was fortunately rescued from the flames, the top of the trunk having been burnt up. We understand the money was put in his charge by one of the Philadelphia Banks, for a New York Bank.

A rough estimate of the loss was made by the passengers, and it was computed to amount to upwards of *five thousand dollars.*

We understand the Agent of the Company acted with great coolness and intrepidity, and did every thing in his power to arrest the progress of the flames.

When the passengers got on board the steamboat, a meeting was called to take the matter into consideration. Joseph P. Grant, Esq. of Baltimore, was appointed Chairman, and J. J. Smith, Jr. of Philadelphia, Secretary. A committee of three was appointed to call upon the Company and represent the nature of the accident, and request remuneration to the sufferers.

Since the above was in type, we learn from another passenger, that the opinion was very prevalent among them that the fire was the result of design, and that it did not originate from sparks from the chimney. He says that the baggage was covered with a thick tarpaulin, and the fire evidently proceeded from the centre of the baggage.

P. S. The mail bag, containing a few letters and papers, was also destoyed. The fragments of forty three leters were received at the New York Post Office last evening, and have been repacked to be returned to Philadelphia this day. One of them contained a check for five hundred dollars.—[Gazette.]

Balloon Ascension.—M. Clayton, who ascended from this place in a balloon, the evening of this day week, has not yet been heard from with any certainty. It was his intention to proceed all night, and reach if practicable some point east of the mountains. The course upon which he departed would conduct him south of Richmond, in Virginia, approaching North Carolina. If he succeeded in keeping up all night, and reaching the Atlantic border in this direction, we may not hear from him in several days. So if he was lost in the night in the wilderness country over which his course lay.—[Cincinnati Gaz.]

Unprecedented Gain.—Five lots of ground were bought in the Sixth Ward of the city of Brooklyn, in 1825, for twenty dollars per lot, and yesterday the same were sold by Messrs. Franklin & Jenkins, at auction, for *ten thousand dollars.*

CHICAGO AMERICAN.—We publish to-day, the prospectus of a newspaper about to be established in the thriving village (city we might almost call it) of CHICAGO, Illinois.

Mr. Davis, the proprietor, is a young gentleman in whom the citizens of Chicago will find all that is desirable as a man of business and character—and to their kindness and patronage, from a long and intimate acquaintance, we can most cordially recommend him. M.

PROSPECTUS OF THE CHICAGO AMERICAN.

☞ In proposing to establish a new paper under the above title, in this great and growing place, the subscriber, in conformity with usage, takes this mode of setting forth the reasons which thereunto move him.

First of all, he thinks there is both a want of, and room for, such a paper as he will endeavor to publish,—a paper which shall be American always, and in all things, and which, moreover, identifying itself with the interests and character of Chicago, and of the vast and fertile region of which it is the heart,—may hope to grow with the growth of this Young Giant of the Far West.

Its politics will be those which the Constitution, as expounded by the men who framed it, inculcates. With party, it will have as little to do as possible; and that little, if it must have a place, shall always be exempt from personality.

As a record of passing events, of current literature, of the march of agriculture, commerce and manufacture, and especially of the progress of internal improvements, in which Chicago has so deep an interest, it will aim always to be accurately and early informed, and thus endeavor to consult alike the tastes and the wants of the community, with which it now, for better and for worse, desire to identify itself.

With this brief explanation of the course he proposes to follow, the subscriber ventures to solicit the aid and patronage of the residents of Chicago, of Illinois generally, of Michigan, and such other districts of country, as may feel interested in a paper to be conducted on the principles here set forth.

The CHICAGO AMERICAN will be printed on a large sheet, and will be published weekly at $2 50 per annum, *if paid in advance*, or $3 at the expiration of six months.

a-16 tf THOMAS O. DAVIS.

The following paragraphs were taken from the Galena Advertiser of 21st March:—

Proposals for five new papers are already before the public. One at Jacksonville—one at Pekin—one at Quincy—one at Rushville, and one at Chicago. This is certainly an evidence of the advancing prosperity and population of Illinois.

A rich and valuable vein of Lead Ore has been lately discovered on the Merrimac River, in Franklin County, Mo., about 50 miles from St. Louis. "On one tract of land, contiguous to the Merrimac, the earth has been opened in various places for more than three quarters of a mile in length, and in every instance a large vein of rich mineral was found.

BOUNDARY QUESTION.—The Ohio State Journal of the 11th inst. states that "no direct intelligence from the disputed territory has been received here since the Governor left for Perrysburg, prior to the 1st instant. We have no fears of any collission taking place with the Michigan authorities; and we presume the Commissioners appointed by our Legislature, to re-survey and mark the line as claimed by Ohio, will meet with no interruption in the discharge of their duties. Michigan, it appears has suspended her *military* preparations and movements for the present, leaving the adjustment of the immediate dispute in the hands of the President The following paragraph contains the only additional information we have on the subject:"—

POSTSCRIPT.

News from the Boundary.—A gentleman (Col. Andrews,) who formed one of the Governor's *suite*, has just returned to town, from whom we learn that all danger of collission with the Michigan authorities is removed. The citizens of the disputed territory, who are unanimous in favor of being attached to Ohio, had held their township elections on the day appointed, and had organized under the laws of this State. No interruption was offered on the part of Michigan, and the Commissioners were proceeding with their survey of the line. The Commissioners appointed by the President were also on the spot, having previously had a conference with the Michigan authorities.

The Detroit Journal and Advertiser of April 10th, says that

We learn that the commissioners appointed by the President to act as meditators between Michigan and Ohio, have had an interview with Gov. enors Lucas and Mason, and that their mission has been unsuccessful—Gov. Lucas having refused to defer the survey of the Northern boundary, and declaring that he would not yield one jot or title, to the solicitations of the commissioners. Some difficulties having already occurred on the border. We are informed that the sheriff of Monroe and some of his deputies have been arrested in the discharge of their duties, by the authorities of Ohio, and carried to Toledo. A good deal of excitement prevails at Monroe, and a serious conflict is appredended.

The Season.—The Macon (Ga.) Telegraph, of 9th inst says—"There was a smart frost yesterday morning."

Relics.—Mr. William Shaw, who found the remains of a deceased British officer or soldier near where the U. S. Arsenal now stands, has given us an opportunity to examine them.—They consist, first, of two bones and a tooth, a large half round button of silver or some composition resembling it, and two smaller ones of the same shape and metal, a pinchbeck buckle about the size of a shoe buckle, but to straight for that, and probably intended for a sword belt; a small bullet, much flattened on one side, and two guineas, one of the reign of William and Mary, the other of Queen Anne.—[Pittsburgh Gazette.]

Fine Fish and Fine Fishing.—HarrySlade, Esq, caught with his hook and line on Saturday last, off Buffalo Harbor, a Salmon Trout weighing 27 lbs.; and on the Wednesday previous, Moses Evans, alone, with hook and line, took twenty-four, weighing 230 lbs. Next week, if old Boreas will shift his course, we propose seeing what an Editor can do, but at this moment Lapland is a fool to our Bay.—[Buffalo Journal.]

[*From the Portland Advertiser.*]

THE MAR CLAIM.—Our readers in this vicinity have lately heard considerable about the Mar Claim, and there is a Mar Stock in the market, in which it is said considerable speculations have been made. The following account of the origin and nature of this claim is given in the Limington Recorder, and probably comes from a gentleman at that place who has paid some attention to the investigation of the subject:

The Earl of Mar.—This nobleman who commanded the army of the Pretender in the Scottish rebellion of 1719, is said to have left a son and a daughter at Newcastle upon Tyne, when he and the unfortunate Prince made their escape into France. Soon after, the son, quite a boy, came to America, and landed at Portsmouth, N. H., where he lived a short time and finally married in Kittery, in this county. After the British government granted a pardon to the Earl with permission for him to return to his estate at Newcastle, he sent for his son who went to England and had an interview with his father. It was agreed that the son should return to America, and accompany his wife to England, but circumstances of an extraordinary nature detained him for two or three years in this country; at last he was suddenly taken sick and died.

He left six children, who settled in different parts of Maine and New Hampshire, from whom originated nearly all in this part of America who bear the name of Mar. The heirs have lately taken measures to recover the immense property left by the Earl of Mar in England, and have sent an agent to Newcastle upon Tyne for this purpose. The property is said to amount to the enormous sum of sixty or eighty millions of dollars.

[*From the Albany Evening Journal of 22d.*]

GALE ON LAKE ONTARIO.—Extract of a letter from Sackets Harbor, dated April 18, to a gentleman in this city.

"There has been a severe gale on our Lake. The steam boat United States is up the Lake and

has been due at this port according to her advertisements, three days. The Avery, Captain D. Read, was about twenty miles up the Lake and could not get back to this port. She would not steer, and rolled broad-side in the sea until her anchors brought her up off Pillar Point, in Chaumont Bay, where she rode out the gale, and pitched so as to split her night heads and hause holes, with her chain cable. The Oswego was in the river and was here to-day. The America has not been out yet. The Great Britain is ashore, near York, and will probably be lost."

[*From the Charleston Patriot.*]

PENSACOLA, MARCH 28.—*Naval.*—The United States sloop of war Vandalia, arrived here from a cruise on Tuesday last. She was at Vera Cruz several days. Order is restored there. The whole of the West India Squadron is now in this harbor.

The following is a list of the officers of the United States sloop of war Falmouth, which arrived last week:

Laurance Rousseau, Master Commandant.
Robert Ritchie, Lieutenant, "
Wm. Pearson, "
James H. Ward, "
Henry K. Thatcher, "
Charles G. Hunter, "
Henry S. Coulter, Surgeon.
Nathaniel Wilson, Purser.
William Lambert, Acting Master.
Benjamin Bunker, Acting Master's Mate.
Albert S. Whittur, Midshipman.
J. W. Bracket, "
Wm. H. Carns, "
Gough W. Grant, "
Napoleon Collins, "
Samuel C. Barney—Boy—Act'g Mid'n.
Samuel Stanley, Act'g Bos'n.
Thomas Robertson, Act'g Gunner.
Samuel V. Hawkins, Sail Maker.
Leroy H. Anderson, Captain's Clerk.
Severn D. Moulton, Purser's Steward.

U. S. SHIP PEACOCK.—This fine vessel has just been fitted out at our Navy Yard, for a long voyage to the Eastern Seas, and her equipment, conducted under the superintendence of Commodore Ridgeley, the able and indefatigable commandant of the station, is quite worthy the high reputation which our ships sustain abroad. She will carry E. Roberts, Esq. the diplomatic agent to whose labors we are indebted for the treaties with the Sultan of Muscat and King of Siam. He bears with him the ratification of those treaties, and goes to complete and establish those relations of amity and commerce for which his enlighted services have already laid the foundation. He will be accompanied by scientific agents, and from their joint observations during the long voyage of the ship, we may expect to derive much information regarding those comparatively unknown countries that will be valuable to commerce and to science.

The following list of the Officers of the Peacock is furnished by the Army and Navy Chronicle:—

Commander—E. P. Kennedy, Esq. *Lieutenants*—C. K. Stribling, G. N. Hollins, W. Green, C. C. Turner, Murray Mason. *Fleet Surgeon*—W. S. W. Ruschenberger. *Assistant Surgeon*—David Harlan. *Purser*—F. G. McAuley. *Acting Master*—S. Gordon. *Passed Midshipmen*—J. Weems, W. Roger Taylor, W. Leigh, B. S. B. Darlington. *Midshipmen*—J. Cotree, G. W. Chapman, W. S. Drayton, C. Richardson, E. S. Hutter, P. C. Vanwyck, S. B. Lee, B. D. Izard, J. C. Williamson. *Boatswain*—John Knight. *Gunner*—Archibald Lewis. *Carpenter*—Wm. Peterson. *Sailmaker*—James Ferguson.

MISCELLANY.

Lord Brougham.—We learn from a private source that this eminent nobleman and lawyer has consented to act as Judge of Scots Appeals in the House of Lords. As the office brings no emolument, his Lordship is entitled to the greater praise, and is thus relieved from the mean suspicions which his enemies are so ready to attach to his character. Lord Brougham has long been anxious that the judicial and political functions of the Woolsack should be separated; and in thus accommodating a successful rival, and leaving him to do justice to the Court of Chancery, offers, to our minds, a very strong proof, that he loves labor for its own sake, and, as regards his retiring pension, is anxious to get rid of an oversensitive feeling that he is putting the country to charges for nothing.—[Dumfries Cour.]

Law of Arrest for Debt in England.—If the law of arrest continue in this country after the noble effort made by Sir John Campbell, (which, if he firmly and vigorously persevere to the end, will transmit his name with honor to posterity, with those of the Jenners, Howards, and other illustrious benefactors of their kind,) it would mark England for the most inhuman and debased nation in the civilized world. We have said that the only real blessings on earth are *Health* and *Liberty*. Let us for a moment, and, for the sake of an illustration, alter the position. Suppose, for instance—and there is as much reason for the one as for the other—suppose that, instead of taking away a debtor's freedom, the creditor should be allowed to take away his physical constitution. We should have this or that vindictive person, employing a surgeon instead of an attorney, or an apothecary in lieu of a bailiff; and he would order him to go every day to his victim, and draw off an ounce of blood, or inflict a wound of two inches, or administer the modicum of a dose of poison; so that within six months the debtor should be put out of pain. We protest that we do not think this would either be so cruel, or so contrary to the merciful dictates of Christianity, as the pangs and miseries inflicted during the long lingering years under the present system of imprisonment for debt.—[London Literary Gazette.]

The new Minister of the Finances in Prussia, the Count Alvensleben, has devoted himself with zeal to the subject of internal improvements, and particularly to the constructions of railroads. A commission has been sent to Paris, to examine the steam carriages of Messrs. Diebz and Asda, with the view of encouraging a similar experiment on the great roads of Prussia.

Rome.—The finances of the Episcopal States are stated to be in the most promising condition, under the administration of the Treasurer General, Mr. Tosti. The revenues of the last year were ample for defraying all the expenses, including a deficit of 700,000 orowns of the preceding year, and there is a surplus in the treasury.

A NEW STATE.—A German paper contains the information that some scattered tribes of Jews, who maintained a sort of independence for a long time, about the southern coasts of Arabia, have been lately visited by Captain Owen. He discovered that an Israelite, of the name of Mahomet Bin Akel, has founded among them a new sovereignty, and raised himself to the rank of Sultan of Morbut and Dschoffar. By means of his wealth, he has purchased a thousand Nubians, whom he has formed into an army, and with this imposing force he has conquered the whole coast from Feutar to Ganew and Hadramond.

Cowper, Johnson and Watts.—The following letter from Cowper to Newton was written in 1781, when the "Task," &c. was published: "I am glad to be undeceived respecting the opinion I had been erroneously led into on the subject of Johnson's criticism on Watts. Nothing can be more judicious, or more characteristic of a distinguishing taste, than his observation upon that writer; though I think him a little mistaken in his notion that divine subjects have never been poetically treated with success. A little more Christian knowledge and experience would perhaps enable him to discover excellent poetry upon spiritual themes in the aforesaid little doctor. I perfectly acquiesce in the propriety of sending Johnson a copy of my productions; and I think it would be well to send it in our joint names, accompanied with a handsome card, such a one as you will know how to fabricate, and such as may predispose him to a favorable perusal of the book, by coaxing him into a good temper; for he is a great bear with all his learning and penetration.

Plagiarism.—A Monsieur Lemare has brought forward before the Academy of Sciences, a stove under the classic cognomen of *aerotherme or air heater*, which is evidently no other than our countryman Dr. Nott's most ingenious apparatus. The heated air circulates around the fire and may be directed in its course, and regulated in its temperature at pleasure. This is not the first time American genius has been robbed by foreign pretenders.

The publishers of the Journal des Debates Constitutionel, and several other journals of Paris, have entered a complaint before the tribunal of correctional police, against the publishers of the French Echo, and the Estafette, for habitually republishing, without acknowledgment, political and literary articles, written exclusively for the journals, whose publishers make the complaint. The cause was brought on for a hearing on the last day of February, and was postponed for a month.

The entrance of the young King of Persia into Teheran, in December last, is described as peculiarly magnificent, and marked with all the characteristic ceremonies of oriental splendor. His majesty mounted his splendid charger at the *hour fixed by the astrologers*—the saddle was embossed with precious stones—the footmen of the court, the bands and the cavalry were in richest costume—camels, oxen, and sheep were sacrificed on the road side as he passed, and bottles, filled with liquors, and adorned with flowers, broken, as is the usage. The ambassadors of England and Russia were in the train, and artillery, and companies with congreve rockets.

Reminiscences.—The following items are taken from a memorandum book kept by one of our oldest citizens, who is now in the vigor of health.—[Merc. Adv.]

1788—July 23d.—Federal procession, in the city of New York, in honor of the adoption of the Constitution.

August 21st.—At 12 o'clock, the foundation stone of Trinity Church was laid, by the Rev. Samuel Provost, Bishop of the Episcopal Church of the State of New York. On the stone is the following inscription:—To the honor of Almighty God, and the advancement of the Christian Religion, the first stone of this building was laid (on the site of the old Church destroyed by fire in 1776)on the 21st day of August, A. D. 1788, in the 13th year of the Independence of the United States of America. The Right Reverend Samuel Provost, D. D., Bishop of New York, being Rector. The Hon. James Duane, Esq., the Hon. John Jay, Esq., Church Wardens.

October 6.—Federal Hall begun, for the accommodation of Congress.

1789—April 30.—George Washington took the oath as first President of the United States.

1790—March 25.—Trinity Church consecrated.

April 17.—Died in Philadelphia, Benjamin Franklin, in the 85th year of his age.

May 21.—Corner stone of Government House laid.

1791.—Great fire in Duke street, New York—Custom House burnt.

1893—January 1.—First Anniversary of the Mechanic Society in the city of New York: Anthony Post was elected President, Daniel Hitchcock, Vice do.

January 22.—Louis 16th beheaded.

August 3.—French fleet arrived at New York.

September.—Great Fever raging in Philadelphia.

September 17.—Intercourse between New York and Philadelphia stopped, on account of fever in Philadelphia.

October 14.—Mrs. Carey's house torn down by a mob.

October 16.—Queen of France beheaded.

1794—March 26.—Embargo laid in America.

May 17.—John Jay sailed on board ship Ohio, Capt. Kemp, as Envoy Extraordinary to the Court of Great Britain.

1795—May 27.—John Jay arrived from England, in ship Severn, Capt. Goodrich.

1796—December 9.—Great fire at the Coffee House.

1797—March 3.—George Washington retired from public service.

March 4.—John Adams, President of the United States.

1798—January 29.—New Theatre opened, with the pieces—"As you like it," and the "Purse."

1799—February 10.—Captain Truxton captured French Frigate L'Insurgente, of 32 guns.

December 14.—George Washington died.

1800—April 10.—Frigate President launched.

April 24.—Frigate New York launched.

Biographical Sketch of Mohammed Ali
Pacha of Egypt, Syria and Arabia.

Mohammed Ali Pacha was born in the year of the Hegira, 1182, corresponding in the Christian era to the year 1769. It is not unworthy of remark, that this year also, gave birth to Napoleon Buonaparte. Alike distinguished for military genius, the characters of these chieftains, are equally marked by insatiate ambition, and unreposing activity.

Early education, the advantages of science, and a more prominent field of enterprise, have given to the history of one, an eclat and brilliancy of success which are denied to the other. Yet, he who would learn to read and write, at the age of 45, as did Mohammed Ali, and from the humble calling of tobacco vender, rise to the throne of an extensive empire, can be no ordinary man, and may bear some comparison with the Hero of France.

With a disciplined army of 50,000 men, a navy of nine line of battle ships, and a revenue of twenty millions of dollars, he may be supposed to have the means of consolidating his power, of establishing his dynasty, and of maintaining his *de facto* independence. He desires to raise Egypt to the level of European civilization, surpassing that of the augustan age of El-Mamoun and Haroun el Rashid. The patronage which he gives to arts and science; his encouragement of Europeans of talent; his printing-presses; polytechnic, elementary, and medical schools; his factories and internal improvements, are evidence of enlightened views in civil administration.

The Pacha is commonly called Mehemet Ali, asthough his name is written Mohammed Ali.—Supreme veneration for the name of his Prophet, forbids a mussulman to desecrate the name of Mohammed, by colloquial use, and therefore is this distinction made in the pronunciation of the name. He is also called Hadgi Mohammed, or pilgrim, having performed his pilgrimage to Mecca, which is one of the five great duties of the acolytes of Islam. Among the numerous ampullated titles, given to him by his courtiers, that of *Hidivi*, or *divine*, is remarkable. Of the Roman Emperors, Augustus was the first whom clambering adulation apotheosized, and associated with divinity.

Mohammed Ali Pacha, was born at Cavalla, a small maritime town of Romelia, in European Turkey. This district is renowned in the east, for its aromatic tobacco, which rivals that of Latakieh, among the dreamy smokers of the oriental *chibouque*. Cavalla is distant ninety miles to the east of Salonica, the ancient Thessalonica, where there is now established a consul of the United States.

Ibrahim Agha, the father of Mohammed Ali, was the chief of police in the town of Cavil a.—At the death of his father, Mohammed Ali, being then quite young, the *Tchorbadgi*, or governor of Cavalla, took him into his service.

An opportunity early presented itself, whilst Mohammed was attached to the family of the *Tchorbadgi*, by which he acquired a character for prudence, ingenuity and bravery. A certain village, within the jurisdiction of Cavalla, had refused to pay its usual contributions. The Tchorbadgi was undecided as to the most efficient measures to be adopted on the occasion, and Mohammed Ali promptly offered his services; they were accepted, and a body of armed men was appointed to accompany him. He proceeded to the village, and at the hour of prayer, when announced by the Muezzin from the Mineret, he repaired to the Mosque to perform his devotions. After having recited his prayers, he sent to request four of the principal Turks of the village, to wait on him, under the pretext of important business.—These persons not suspecting any design upon them, repaired to the Mosque. Mohammed Ali immediately commanded his followers to seize and bind those chief villagers, who were conducted to Cavalla, amidst the threats and pursuit of the inhabitants.

This dashing act of bravery and finesse, resulted in the payment of their contributions by the refractory villagers; and the Tchorbadgi was so well pleased with it, that he promoted the youthful Mohammed to the rank of *Bolouk Bashee*, or captain of a company. He also gave him in marriage one of his relations, a widow, by whom he had three sons, Ibrahim, Toussoun, and Ismael. This marriage of a widow has given rise to the report, that Ibrahim Pacha, the conqueror of Acre and Syria, is the stepson of Mohammed Ali.

Of these three elder sons, Toussoun and Ismael Pachas, died some years ago. The former conducted a successful expedition against the Wahabies of Arabia.

A most faithful and eloquent history of this formidable sect of Islam, is to be found in the popular novel of Anastasius, by the late Thomas Hope.—Ismael Pacha was commander-in-chief of the expedition against Sennaar and Kordofan, where he was assassinated by one of the subjugated chiefs.—A blow inflicted on this chief by the Pacha, was avenged by his assassination. It was this expedition to Sennaar, which Mr. George Bethune English, of Boston, accompanied, in a military capacity, and an account of which he subsequently published.

Ibrahim Pacha, the remaining son, is now in Syria, with a numerous army reposing upon the laurels acquired in his late battles with the Grand Vizier, and the Sultan's disciplined troops.

Mohammed Ali, after his marriage, joined to his military profession, the trade of a merchant, and became an extensive dealer in tobacco, the richest product of Romelia. In this trade, he acquired his first notions of commercial monopoly, to which he has since more strictly adhered than comports with sound principles of political economy, or the well being of his Egyptian subjects.

He was soon called to enter upon a wider and more important field of enterprise. Napoleon had invaded Egypt, and the battle of the pyramids had defeated the Mamaluke, opened the gates of Cairo, and secured possession of the country. In 1800, the Sublime Porte, in alliance with Great Britain, and aided by her forces, made preparations to recover Egypt; and among the contingents of troops required by the Porte, was one of three hundred men from the district of Cavalla. They were raised by the Tchorbadgi, and placed under the command of Ali Agha, his son, and Mohammed Ali was appointed to the double office of Ali's mentor, and his second in command. Ali Agha soon became dissatisfied with the fatigue of camp, and returned home, leaving his company under the orders of Mohammed Ali. He thus acquired the rank of *Bin Bashee*, in the army of the Grand Vizier.

After the victories of Aboukir, and the camp of Cæsar, gained by the British troops, the Grand Vizier commenced offensive operations. Mohammed Ali, in frequent engagements with the French divisions, signalized himself by great personal bravery and by military tact, if not by strategetic science.

The limits of this sketch require us to pass over the numerous incidents of the Pacha's eventful career, during which he was alternately applauded and reproved by his superiors, until the important period of his election, as Governor of Egypt, by a deputation of *Scheiks*, on the 14th of March, 1805. The country was at that period, a prey to intestine war, caused by those petty tyrants the Mamaluke Beys. He skilfully evaded or resisted their attacks and machinations, and succeeded in obtaining, two months after the election, his confirmation as Pacha of Egypt, by the Sublime Porte.

The policy of the British Government at that epoch favored the civil dissentions created by the Mamaluke Beys. It openly declared itself against the Pacha, and the British Ambassador near the Sublime Porte was instructed to demand his recall. This demand was supported by the intrigues of ambitious rivals at Constantinople. The present Seraskier Pacha, Husref, was then, and continues to be, one of the most embittered and untiring enemies of Mohammed Ali, to whom he attributes the revolt of the Albanians at Cairo, and his subsequent expulsion from the command of that capital.

The Sublime Porte yielded to the compound influence of foreign solicitation and domestic intrigue, and Mohammed Ali was ordered by an imperial *firman* to leave Cairo, and repair to Salonica (Thessalonica) to assume the administration of that Pachalick. He evaded obedience to the Padischah's firman, until important services supported by bribes judiciously distributed at Constantinople, induced the Sultan to reappoint him to the Pachalick of Egypt. He was deemed by the Imperial divan to be the only man capable of governing that country, in the critical posture of affairs at that period.

French influence gained the ascendency in the Ottoman councils in 1807, and Great Britain declared war against Sultan Selim and invaded Egypt. Mohammed Ali's troops met the British forces at Rosetta, and defeated them. They were subsequently compelled to evacuate Alexandria, which had capitulated to General Frazer. It was at this period that the British squadron, commanded by Admiral Sir John Duckworth, passed the tremendous batteries of the Dardanelles, and anchored off the city of Constantinople. The passage of the Dardanelles by an armed force, had never before, and has never since, been attempted. It was then that the navy of England could ask, *quæ regio in terris, nostri non plena laboris?* We may not forget, that some years before this signal event, our own Captain Bainbridge passed the Dardanelles, in his frigate the Washington, and displayed for the first time the star spangled banner in the Golden Horn.

The Sublime Porte was sensible of the important services rendered by Mohammed Ali, in the then war with England, and received frequent expressions of his Sultan's satisfaction, in rich and sumptuous presents. He continued to preserve his government against internal foes and foreign machinations. The Mamaleuk Beys remained in arms against him, and carried on a desultory warfare. Mamaleuk Elfi Bey was supported by British influence.

On the 1st of March, 1811, Mohammed Ali succeeded in destroying the greater part of these refractory Beys, by a sanguinary and treacherous act, which has no parallel in any annals but those of eastern empires. It would be so judged by the rule of abstract morals, yet political necessity would sanction it in the east. The Pacha had not then studied Machiavelli, which he has in part since read. He had succeeded in conciliating those Beys to a certain degree, and had disarmed their fears and suspicions. About this period, the expedition against the Wahabies, the enemies of Islam, was preparing to leave Cairo. The departure of this expedition was made the occasion of calling together the civil and military authorities, under ceremonies becoming the occasion. The Mamaleuk Beys were also invited to join the ceremonies and the procession which was to signalize the event. They obeyed the invitation, and were received with every demonstration of friendship, and with distinction suitable to their rank. Here then the Pacha had artfully succeeded in assembling, at the citadel of Cairo, the chief Mamaleuks, to the number of four hundred, those early and formidable enemies, both to his personal aggrandizement and to the tranquillity of Egypt.

The citadel of Cairo, within which is the Pacha's palace, and the dilapidated, but once gorgeous serai of Selah-eddin, (Saladin) rests on a projecting shoulder of Mount Mokattam. From its frowning ramparts are seen, to the west, and beyond the Nile, the towering pyramids of Gizeh, and the lesser ones of Sakhara and Dashour; the allegoric sphinx lies couchant before you, as in centuries gone by, and the renowned Memphis is faintly distinguished by the few remains of her ancient glory, now concealed by clustering groves of the graceful palm. Immediately below the ramparts, reposes Cairo, *the mother of the world*, as she is called in the figurative language of Arabia, with her populous avenues, her tongues of Babel, sumptuous palaces, and more splendid mosques, and minarets. The silver stream of the "blessed" Nile, flows by the walls of Cairo, bringing fertility to the earth, and joy to its people.

From this citadel the military procession, led by Toussoun Pacha, who had been appointed to command the expedition against the Wahabies, moved, and in descending to the city, passed through a narrow passage or defile. On either side was the solid rock surmounted by high walls. When the Mamaluke Beys entered this defile, the gates at both end were closed, and soldiers previously stationed for that object, commenced firing upon these unsuspecting victims of a treacherous design.—One Bey alone escaped from the horrible ambuscade.

The Pacha, a few years afterwards, replied to an allusion made to this dreadful massacre, that it would appear in history, along with the execution the Duke d'Enghein, by the great chieftain who had then filled the world, with the military glory of France.

An anecdote somewhat ludicrous, connected

with this tragic scene, may convey some idea of the indifference with which human life is regarded in the east, and the apathy of the Orientals to human blood. An European Consul asked an officer of the Pacha, who was witness to the massacre, if his feelings were not shocked. "Yes," he replied, "it was a pity to see so many embroidered dresses, rolling in the dirt." Another anecdote is told at Constantinople, of a Reis Effendi, who had lost his favorite circassian by the plague. The Dragoman of the Austrian internuncio, during an official visit to his Excellency, expressed himself in terms of condolence, for the painful event. "Yes it was a great loss," said the Effendi, "my *khanum* cost me *one hundred purses*."

The successful expedition of the Pacha, against the Wahabies of Arabia, the formidable enemies of the Moslem faith, established his reputation as a warrior, his claims to the consideration of the sublime Porte, and of the whole Moslem world, and secured his uninterrupted possession of Egypt. The war was concluded in 1813, by the capture of Deraieh, the Wahaba capital, and of their Chief *Abdullah-ebn-Souhoud*. The conduct of the war, which had been committed to Toussouin Pacha, was subsequently entrusted to Ibrahim Pacha, Mohammed Ali's eldest son. By him the war was brought to a close, and Abdallahebn-Souhoud was sent to the Sultan, under the charge of Ismael Pacha, together with the few remaining objects of value, which was recovered from among those which Souhoud's father had plundered from the sacred shrines of Mecca and Medina. Of these the most remarkable was a copy of the Korau, so small as to have rivalled the Illiad of Homer, which Alexander carried about his person. There were also pearls and precious stones of unknown value, which pious veneration had bestowed as votive offerings, at the tomb of the Prophet. Abdallah-ebn-Souhoud was presented in chains at the foot of his sovereign, and Mohammed Ali had interceded in his favor, for imperial clemency. Sulton Mahmoud was relentless towards the chief of an heretical sect, which had for so many years defied his authority, desecrated the holy places of the Prophet, and interrupted the annual pilgrimages of the Moslem world, to the venerable *Cauba*, the waters of Zemzem, and the sacred sepulchre at Medina. Souhoud was publicly decapitated at Constantinople, in the open square, which may now be seen by the traveller, between the Porte of Sublimity and the Mosque of Santa Sophia.

The Wahabies, as a religious sect, have the same reference to the Mahommedan religion, which Socinianism has to Christianity. The founder, Abd-ul-Wahab, was born in the last century, and after having studied divinity at Medina, and in the *Medressehs*, or theological schools of Bagdad, Bassorah and Ispahan, he began to preach the novel doctrine, that the Prophet Mahommed was but a mere man, and that to invoke him wih other saints, was idolatry, and was not authorized by the Koran. He adhered religiously to the text of the sacred book, but rejected all traditions, *Hadith* and the coumentaries of the Imams or doctors. He contended that Mussulmans must be brought back to the original spirit of the Koran, to the exclusive worship of God, in his undivided unity. In this spirit, he forbade the pilgrimage to Mecca, the invocation of the Prophet, the use of luxuries, tobacco, opium, silk, and jewels. Following the example of the Prophet, he propogated his doctrines with the sword, and the armies of his successors marched upon Mecca and Medina, destroyed those venerable shrines, and robbed them of the unnumbered votive offerings, with which they had been enriched by piety and devotion.

Such were the doctrines of this warlike sect, which had for a long while contemned the spiritual, and defied the temporal, authority of the Sultan.

Relieved from this formidable enemy, Mohammed Ali was now at liberty to subjugate the southern provinces of Nubia, Sennaar, and Kordofan. These countries had for a long time, been in a state of anarchy and rebellion to the Government of Egypt. He accordingly, in 1820, sent an expedition of four thousand men, to those countries, under the command of his second son, Ismael Pacha, which resulted in the conquest of those extensive provinces, with which Egypt has always had an important commerce. It was this expedition, which our countryman, *English*, accompanied. *Khalil Agha* of New York, was also attached to the army. We have another instance of the adventurous spirit of Americans, in one, who is at this moment, Governor of a District, within the territories of the Indian Prince, Runjeet Sing.

The Greek revolution commenced about this time, and Mohammed Ali prepared to obey his Sultan's *firmans*, and to furnish aid in troops, ships, and money. Whilst he opposed the movement of the Greeks, and contributed his efforts towards the suppression of their rebellion, it must be said in honor of his humanity, and in praise of his enlightened policy, that he did not imitate the massacre of these unfortunate subjects, who were residing at Constantinople. No Greek subject in Egypt was molested, and those who fled to that country were protected.

The friends of Greece, in Europe, did not so much fear the hostilities of the Sultan, as of the Pacha, in its struggle for independence. It is believed that this sentiment induced some of the greater cabinets to hold out to the Pacha the possibility of his independence, to withdraw him from combined operations with the Porte.—Whether he distrusted Christian diplomacy, or was content to enjoy his *de facto* independence, he yet continued to furnish the principal means of operation against the Morea. The policy of European cabinets was for once imperfectly understood, anp pertinacity caused the loss of the Fgyptian squadron at Navarino, and the retirement of Ibrahim Pacha's legions from the peninsula.

The declaration of war against Russia in 1828, by the Sultan, was made contrary to the counsel of Mohammed Ali, and its result confirmed the wisdom of that advice. Causes of jealousy and dissatisfaction towards his Pacha continued to multiply in the mind of the Sultan; which found ostensible motives in the attack which Mohammed Ali made upon Abdallah Pacha of St. Jean d'Acre in 1831. The immediate origin of this war was the protection which the Pacha of Acre gave to the fugitive subjects of Egypt. Mohammed Ali asked not the intervention of the Porte, although he was equally its vassal with Abdallah Pacha. On the refusal of the Pacha to obey the mandate of the Porte, and to withdraw his troops from Syria, he was officially denounced by the Sultan as a rebel and outlaw. This sentence of excommunication from the Caliph or head of Islam, has as much force now, as had that of the Pope in the feudal ages.

The Sultan sent his forces into Syria, under command of Hussein Pacha, Beglerbeg of Anatolia, to oppose the advance of Ibrahim Pacha. Hussein was beaten in a pitched battle, and driven from Damascus to Homs, thence to Aleppo, and across the Taurus to Koniah. At this place the Grand Vizier, Reshid Mehemit Pacha, was made prisoner, in a sanguinary action, and the whole army of the Sultan became demoralized. Ibrahim Pacha might have marched upon Constantinople, but for the intervention of an armed Russian force, to protect the capital, and for the interference of European diplomacy.

In the city ot Kutahieh, of Asia Minor, in the spring of 1833, the commissioners, envoys of England, France, and Russia, concluded an armistice and convention, for the evacuation of Anatolia. By this convention, with the consent of the Porte, Mahommed Ali received his confirmation to the whole of Syria, comprising the four Pachalicks of Aleppo, Tripoli, Damascus, and Saida, together with the province of Adana, which is of primary importance to Egypt on account of its timber. The news of peace was received at Alexandria, with demonstrations of public joy, and were attended with every species of festivity. The Pacha was compared to the "*Alexander of two horns.*"

The negotiations that took place, and diplomatic notes that passed between Mohammed Ali and Admiral the Baron de Roussin, embassador of France at the Porte, exhibit the true character of the former. He replied, in answer to the requisition of the Baron to withdraw his troops from Anatolia, "is not this pronouncing against me a sentence of political death? But I feel confident that France and England will not deny me justice. They will acknowledge my rights. Their honor is opposed to this step. But if I am unhappily deceived in this expectation, I will submit myself, under such circumstances, to the will of God; and *preferring an honorable death to ignominy*, joyfully devote myself to the cause of my nation, happy to consecrate to it the last breath of my life. Upon this I am determined, and history offers more than one example of a similar immolation."

Mohammed Ali is now in the undisputed possession of Syria, Egypt, the Hedjas of Arabia, Nubia, Sennaar, Kordofan, and the important Island Candia. That he will transmit his power and empire unimpaired to his successor in the dynasty, his past history justifies the belief.—When he was invited to take supreme command in Egypt, thirty years ago, he said, "I have now conquered this country with the sword, and by the sword will I preserve it!"

Mohammed Ali is in person of middling, or rather low stature. He is now in his sixty-seventh year, and possesses a constitution sound and vigorous. His features are not those of the Osmanli, of Constantinople, where one may frequently find the *beau ideal* of manly beauty.—The Tartar face, with its high cheek-bone, small eyes, and general flatness, which are peculiarly his, have been lost among the Ottomans, of the capital, by their marriages with the Greeks of Ionia, or the more languishing beauties of Circassia and Georgia. His dark gray eyes beam brighly with genius and intelligence, and his manners would be marked with more dignity, had they more repose. It would be difficult not to feel the presence of a superior man, when one is addressing Mohammend Ali. His dress, unlike that of Sultan Mahmoud, is not of the *nizam*, or reform. He still wears the turban, which the Sultan has abandoned, and this use of a most graceful head-dress will be approved by all persons of good taste. This remark applies only to the east. His dress is of plain olive colored cloth, without embellishment or decoration. At his side is always suspended a curved scimitar.

The Pacha is an early riser, and of abstemious habits. At the break of day he performs his orisons, and at sunrise, he repairs to his divan, for the transaction of business. After sunset he dines, and retires to his harem, where he either reads himself, or reclines on an ottoman, whilst one of his favorite Sultanas, the daughter of a mufti, and an accomplished woman, reads to him, by his instruction. He has lately been engaged in reading Montesquieu's *esprit des loix*, every successive sheet of which is prepared in manuscript by the translator, is taken by him to his harem, and becomes the occupation or relaxation of his evening. Machiavelli he read some years ago, and the code Napoleon is now the object of his deepest study and reflection.

This short sketch of the eventful life of Mohammed Ali, is not intended to exhibit the wonderful improvements which he has introduced into Egypt, nor the more wonderful personal superintendence, which he exercises over every department of the arts, and every branch of industry.—It is hoped, that the impetus which he has given to civilization will not be checked, and that if his *de jure* independence should, in any manner, contribute to this desirable object, the conflicting interests of European and the Turkish cabinets, may be conciliated, and be directed to concur in such an acknowledgment.

Mourning.—In Europe, black is generally used because it represents darkness, unto which death is like, as it is a privation of life. In China, white is used, because they hope the dead are in heaven, the place, of purity. In Egypt yellow is used, because it represents the decaying of trees and flowers which become yellow as they die away. In Ethiopia, brown is used, because it denotes the color of the earth from whence we came, and to which we return. In some parts of Turkey blue is used because it represents the sky, where they hope the dead are gone; but in other parts purple and violet, because being a mixture of black and blue, it represents, as it were, sorrow on one side, and hope on the other.

A person near London recently attempted to walk 7 miles in 60 minutes, and lost his wager by 30 seconds. He had 9 minutes 37 seconds to do the last mile in, but his strength was over tasked, and he failed in the attempt.

Mechanical Skill of the Ancient Egyptians.—The inner chamber contains subjects of the most interesting and diversified kind. Among these, on the left (entering), are cabinet makers, carpenters, rope makers, and sculptors, some of whom are engaged in levelling and squaring a stone, and others in finishing a sphinx, with two colossal statues of the king. The whole process of brick-making is also introduced. Others are employed in heating a liquid over a charcoal fire, to which are applied, on either side, a pair of bellows. These are worked by the feet, the operator standing and pressing them alternately, while he pulls up each exhausted skin by a string he holds in his hand. In one instance the man has left the bellows, but they are raised, as if full of air, which would imply a knowledge of the valve. Another singular fact is learnt from these frescos—their acquaintance with the use of glue—which is heated on the fire, and spread, with a thick brush, on a level piece of board. One of the workmen then applies two pieces of different colored wood to each other, and this circumstance seems to decide that glue is here intended to be represented rather than a varnish or color of any kind.—[Wilkinson's General View of Egypt.

Principles of the Cotton Manufacture.—Let us briefly review the different processes through which the cotton goes, in its conversion into cloth, all of which are performed in many of the large spinning and weaving mills. The cotton is brought to the mill in bags, just as it is received from America, Egypt, or India; and it is then stowed in warehouses, being arranged according to the countries from which it may come. It passes through the willow, the scutching-machine, and the spreading-machine, in order to be opened, cleaned and evenly spread. By the carding-engine the fibres are combed out and laid parallel to each other, and the fleece is compressed into a sliver. The sliver is repeatedly drawn and doubled in the drawing frame, more perfectly to strengthen the fibres, and to equalize the grist. The roving-frame, by rollers and spindles, produces a coarse and loose thread, which the mule or throstle spins into yarn. To make the warp, the twist is transferred from cops to bobbins by the winding machine, and from the bobbins to the warping-mill to a cylindrical beam. This beam being taken to the dressing machine, the warp is sized, dressed and wound upon the weaving beam. The latter is then placed in the power-loom, by which inachine, the shuttle being provided with cops of weft, the cloth is woven. Such, without entering too much into the minutiæ, are the processes by which the vegetable wool is converted into a woven fabric of great beauty and delicacy; and it will be perceived that the operations are numerous, and every one of them is performed by machinery, without the help of human hands, except merely in transferring the material from one machine to another. It is by iron fingers, teeth, and wheels, moving with exhaustless energy and devouring speed, that the cotton is opened, cleaned, spread, carded, drawn, roved, spun, wound, warped, dressed, and woven. The various machines are proportioned to each other in regard to their capability of work, and they are so placed in the mill as to allow the material to be carried from stage to stage with the least possible loss of time. All are moving at once, the operations chasing each other; and all derive their motion from the mighty engine, which, firmly seated in the lower part of the building, and apparently fed with water and fuel, toils through the day with the strength perhaps of a hundred horses. Men, in the meanwhile, have merely to attend on this wonderful series of mechanism, to supply it with work, to oil its joints, and to check its slight and unfrequent irregularities;—each workman performing, or rather superintending, as much work as could have been done by *two or three hundred* men sixty years ago! At the approach of darkness this building is illuminated by jets of flame, whose brilliance mimics the light of day,—the produce of an invisible vapor, generated on the spot. When it is remembered that all these inventions have been made within the last seventy years, it must be acknowledged, that the cotton mill presents the most striking example of the dominion obtained by human science over the powers of nature of which modern times can boast. That this vast aggregate of important discoveries and inventions should, with scarcely an exception, have proceeded from English genius, must be a reflection highly satisfactory to every Englishman. —[Baines's History of the Cotton Manufactures.]

Platina.—By a report in the Berlin State Gazette on the subject of platina, it appears that the quantity of ore extracted from the mines in the Ural Mountains, from the summer of 1824 to January 1834, was 230 quintals, two thirds of which consisted of pure metal. Of this, about 153 quintals were coined, amounting to a sum a little exceeding 8 million rubles. But little revenue had been derived from the mines, beyond the cost of the establishments. The coin is said to have thus far preserved an exact mean between the value of gold and silver.

Christianity in Jerusalem.—A Protestant church has been established at Jerusalem.—[There have been Catholic chapels in Jerusalem for more than six hundred years.]